



U. S. Department of Energy

Office of Energy Efficiency and Renewable Energy

Toolbook **for Financing Energy Efficiency and Pollution Prevention Technologies**

"Energy efficiency improvements have helped reduce our production costs and have led to business growth. This, in turn, is good for our local economic and employment picture."

– John Lessard, President, Fox River Mills

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Preface

The Department of Energy's Office of Energy Efficiency and Renewable Energy is conducting Innovative Financing Workshops and sponsoring important tools such as this book for three reasons:

- the potential for increasing the efficiency of energy use in manufacturing is enormous and largely untapped and directly impacts the bottom line;
- manufacturing is a crucial part of the U.S. economy; and,
- few conventional sources of financing focus on production process technologies.

The Importance of Manufacturing

Like an engine which drives a car, manufacturing drives the economy. At the National level, \$1 in final sales of manufactured goods generates about \$1.30 in activity in other sectors. By implication, the effect of \$1 in Gross Domestic Product (GDP) in manufacturing is to generate \$2.30 in total production. On average, each \$1 million in final sales in manufacturing is associated with 13.6 jobs in manufacturing—both the jobs to produce the final product and the intermediate products that go into it—and 8.4 jobs in other sectors such as raw materials and services. Moreover, the manufacturing sector is responsible for the majority of research and development performed in the United States—and by some estimates R&D is responsible for up to 50% of our economic growth. While manufacturers represent a vital component of the National economy, many U.S. companies falter in the increasingly competitive global marketplace.

Crane Valve

For example, Crane Valve of Washington, Iowa, a foundry and valve manufacturing facility built in the 1960s and employing 130 people received an energy audit from the local utility which indicated potential savings of \$96,000. After continuing to audit and implement process improvements for energy efficiency, waste reduction, and other productivity improvements, Crane Valve was able to:

- decrease kwh from 1,023 per ton to 727 per ton (a 29% reduction);
- increase production from 32 tons to 72 tons (a 125% increase); and,
- increase the number of employees by 24 while man hours per ton dropped from 13.5 to 5.

These dramatic results were achieved by tuning and repairing equipment, training personnel, and improving the production process from the standpoint of quality control and reducing scrap rate from 16.1% to 5.8%. Crane Valve saved \$300,00 annually, 25% from energy efficiency and 75% from production improvements and waste reduction.

Often they lack the technical and financial resources available to companies in Japan and Europe. The Office of Technology Assessment in *Making Things Better: Competing in Manufacturing* argued that the United States must improve its manufacturing technology; not only by generating new products but by teaching how to use equipment, organizing work, and managing people who make the products.

U.S. manufacturers are competing with many countries who provide their companies with low-cost, direct loans, as well as tens of billions in loan guarantees. In the United States the relationship is different. This workshop highlights the opportunities for partnering that can be critical to success in the global economy.

Often U.S. manufacturing plants were built, run until they were unproductive, and then closed down. A new state-of-the-art plant may open in a new location. But the old plants stand empty and unused, creating what's known as "brownfields" abandoned plants reminding cities of the old days. Fortunately, we have begun to understand the waste of resources inherent in this process. The staggering problems of brownfields and the sprawling greenfield development, purchasing farmland to build new manufacturing plants, attest to the associated costs. Just as companies have learned the cost advantage of recycling resources, innovators are investing in existing manufacturing plants to improve their efficiency, competitiveness, and life. Finding new enterprises to locate on abandoned plant sites presents real challenges; far better to prevent plant closures by retrofitting for efficiency.

Success stories exist. Public/private partnerships in energy efficiency and pollution prevention can be effective. In Bowling Green, Ohio, the municipal utility, the Bowling Green Community Development Foundation, and the Ohio Department of Development's Office of Energy Efficiency conducted a pilot program with four participating factories (a foundry, a hydraulic cylinder manufacturer, a metal stamping plant, and a plastic parts manufacturer) that exceeded the expectations of all of the partners. With \$48,000 from the Office of Energy Efficiency and \$4,500 each from the utility and the foundation, an outside expert conducted assessments for the plants. As a result, in the first year the companies invested \$60,000 in improvements which resulted in cost savings totaling \$400,000 annually. The investments the companies made in the first year paid back in less than four months. Yet the project benefited all the partners. The State's contribution paid back in 5 days from expanded tax revenues, to the utility in 1.5 days from utility revenues, and 2 days from local tax revenues to the local government. These results are compelling and justify efforts to make capital more available to manufacturers.

Scarce Capital for Equipment

Companies have a hard time finding capital to pay for equipment or technology for a variety of reasons: banks may be reluctant to lend money for technology they are unfamiliar with; lenders may be concerned about whether technologies will deliver the savings estimated; and many hesitate to allow the full value of equipment they do not understand for collateral. The uncertainty impedes the implementation of cost-effective efficiency improvements in two ways: good opportunities are missed because companies can't secure funding and companies may conclude that projects aren't good because they can't get capital to pursue them.

Opportunities exist to link technical providers to lenders or other financiers in order to provide objective information on a project's impact on the companies' operation and maintenance costs. One purpose of this toolkit is to help facilitate this process. Similarly, technical providers can often provide examples of companies that have installed similar technologies that can provide proof of operational impacts to lenders who are unfamiliar with the equipment. Finally, providing the financial means to companies to undertake efficiency improvements makes sense from several perspectives. As the Bowling Green example illustrates, a company that invests in enhanced efficiency, invests in its present and future viability in the marketplace. The competitiveness of small and mid-sized manufacturing underpins the local economy, yet it is this segment of manufacturing that typically has the most trouble keeping up with the pace of technological change. It often has the fewest resources on which to draw.

Why Energy Efficiency?

The potential for improving energy efficiency in manufacturing is well documented. Both the Electric Power Research Institute (EPRI) and the Congressional Office of Technology Assessment (OTA) found that U.S. manufacturers, even energy-intensive factories, could reduce energy use substantially. OTA calculated that energy intensive industry could reduce energy use by 16 to 37% with existing technology. Case studies to date suggest that substantial improvements can be made without enormous investment in new equipment or technologies. In many plants, a process of continuous improvement can utilize the savings from low-cost improvements to encourage management to consider more costly projects once the benefits of the initial investments become apparent. Rather than viewing waste—whether wasted energy or resources—as an inevitable by-product of manufacturing, waste should be viewed as a measure of plant inefficiency. Dramatic improvements in efficiency and productivity can result once employees and plant owners view their waste stream from the same cost-cutting perspective as has been afforded to “downsizing,” “rightsizing” and restructuring.

Best viewed as a goal, energy efficiency improvement becomes a process rather than a single project. An effective industrial efficiency program strives for a commitment to improvement that involves plant employees as well as management. Technologies, markets, and opportunities for manufacturers constantly change. Effective companies build a commitment to continuous improvement within the manufacturing facility. Similarly, plant employees must be motivated to participate in the plant's energy efficiency goals.

The process of making products from materials and inputs requires energy to move, mold, heat, machine, clean, pack, and ship. Typically the largest energy savings come from changes in the production process. By evaluating the use of energy in a production line with an eye to improving efficiency, other benefits often become apparent--gains in productivity and/or reduction in the generation of waste. The Crane Valve company, provides a good example of this. Similarly, many new technologies are more energy efficient than older ones.

Productivity Through Technology

Because of their success in job creation and technological innovation, small manufacturers have become the vanguard of growth and competitiveness in the U.S. economy. Technical assistance programs, therefore, typically concentrate on helping smaller firms, usually those with fewer than 500 employees. Many Federal and State technical assistance resources are available to manufacturers, but manufacturers need to realize that they have different goals (i.e., technology innovation, product development, or technology diffusion); different sectorial targets; and different quirks in terms of the nature and extent of assistance, as well as its cost.

When considering whether or not to use a public program as a technical or technology assistance partner, manufacturers need to remember the general philosophy behind all of these public-sector efforts.

Small enterprises have enormous potential to stimulate economic growth, but they also have the greatest need for technical or management advice or links to financial support. The impetus for action rests with the private sector, and manufacturers themselves need to commit to invest in improving production processes and adapting more modern technologies. Yet within this framework of private-sector action and market forces, the public sector can play an important technical information, liaison, or brokering role, enhancing private decisions with public-sector support.

A driving force behind many Federal and State efforts is bringing existing technologies to established companies that have not considered them before and this includes deployment of technologies useful to manufacturers that can help with production improvements, as well as those that can lead to operational or energy consumption efficiencies. This type of technology deployment can make these enterprises operate more efficiently, without compromising proprietary information or other company “secrets.” It also can help them establish new product lines, which can be especially important in areas where the manufacturing base is eroding and traditional producers are looking for new growth opportunities.

The toolbox provides information on several different technical assistance programs. Despite their diversity, manufacturers should be aware that they address one or more of the following four goals:

Developing new technologies and products. Many research institutions, such as Federal labs, have long traditions of research, but promoting the “commercial applicability” of those research results is a new arena for them. To encourage these institutions to promote new technologies and products, two types of technology transfer strategies typically are pursued: (1) using existing advanced technologies in new ways; and (2) supporting research to develop new technologies and help bring them to market. What this means, in practice, is that manufacturers have a window of opportunity to identify and explore a wealth of information on and opportunities for innovations that could prove quite profitable if commercialized. In the case of small and mid-sized companies, this opportunity would not be available any other way, because of cost and technical concerns.

These institutions are interested in forging new partnerships, but many are still developing their approaches to these partnerships. Therefore, manufacturers may want to take the first step, contacting these organizations, explaining their need, and working with them to identify possible joint activities. Federal agencies and local officials are encouraging such partnerships in order to enhance manufacturing activity, spin-off entrepreneurial enterprises, create and retain jobs, and increase tax revenues.

Bringing more modern technologies, processes, and efficiencies to existing industries. In several areas, notably the industrial Midwest, public-sector technology initiatives have helped existing industrial operations attract new investment capital for modernization projects. These “technology deployment” efforts are dispelling the myth that technology innovations and traditional manufacturing operations do not fit together. Federally-supported programs are credited with developing key breakthroughs in a wide range of industrial sectors, in areas such as CAD/CAM, ceramics, and welding. These breakthroughs have improved productivity in heavy industry. State programs have tallied similar achievements. Most of these efforts are aimed at helping small and mid-sized operators, unable to explore these areas on their own, adopt new and existing technologies.

Helping new and small manufacturers access the technology they need to compete. If public program experts or other technical service providers can help these firms adapt newer, more productive technologies, their ability to sustain markets and retain jobs will be strengthened, and they can continue to play an important role in community economies. Many of these companies have been founded and operated by entrepreneurs who have good ideas about what will work or sell in their area. Often, however, these entrepreneurs do not have access to the technical facilities, information, and similar resources necessary to develop, produce, and market the next generation of products or services for their traditional customer niches. A key role of technical assistance programs is to help such companies better understand how they can use technology to ensure that their products remain competitive in the eyes of customers locally and in the global marketplace. In addition, these programs allow small companies to gain access to information and facilities that only large companies can usually afford.

Easing the expansion process for firms already established, or prevent plant closings. In many cases, technical assistance programs can help firms that successfully have overcome start-up hurdles prepare to expand. Manufacturers have welcomed such programs as a reliable, neutral source of information for plant owners or managers facing critical decisions about modernization or diversification. In other situations, technical assistance programs can serve as an information lifeline for troubled manufacturers, helping them overcome identified difficulties and anticipate their needs. When long-time shop owners finally confront issues such as erosion of their customer base and obsolete production processes, they often have no place to turn for help. Given their broad web of contacts, program staff may be able to help these manufacturers develop new products and seek new markets, as well as work with creditors and suppliers to help ease the company's transition and buy it some breathing room. Technology transfer typically surfaces as a major barrier for these companies; manufacturers can use Federal and State programs to play an important role by linking the firms to the expertise and resources they need to surmount this barrier.

Depending on the program, technology development and transfer programs participate in or coordinate a series of activities in which research with commercial potential is refined and brought to market. Publicly supported programs and research and technology centers take several forms:

- research and development efforts in one industry, such as chemicals;
- comprehensive resource centers that link scientific and service networks; and
- one-stop advanced centers offering prototype development and servicing a variety of business types and sizes.

Federal technology programs, and many State initiatives, address manufacturing technical assistance needs in various ways. Some programs put formal networks in place; others arrange for small operations to share facilities and equipment with larger producers; still others encourage resource entities, such as universities, to seek out and work with prospective beneficiaries. Other programs focus on commercialization, a key part of a successful technology transfer initiative.

Successful technology development and transfer programs targeted to product development can use public-sector intervention at two stages: (1) during the early steps to stimulate research on new technologies; and (2) with subsequent efforts to promote their commercial application.

In addition, rather than concentrate solely on "high" technology, many programs have broadened their scope to focus on "advanced" technology. In the case of technology deployment initiatives, program staff will work with existing manufacturers, regardless of sector, in applying proven technological techniques to upgrade and modernize a production process, or introduce greater efficiencies into the operation.

Good technical assistance can improve business efficiency and profitability. For the many small manufacturers—machine shops, foundries, and metal workers, for example—that are owner-operated and have small profit margins, savings of as little as a few thousand dollars can have big impacts. Public program officials can improve the economic climate for these firms by serving as a conduit to needed assistance services. In fact, many of the most successful programs are those skilled in obtaining good, affordable technical assistance quickly.

This toolbox will help bridge these gaps between manufacturing and efficiency by encouraging a wide variety of people to focus on the potential that exists to improve the energy efficiency of manufacturing:

- underscoring the numerous benefits that would accompany such an approach to manufacturers, financiers, and policy makers;
- helping manufacturers work in the financial community to find the capital and other resources needed to implement production efficiencies;
- helping manufacturers better understand lenders' views of risk;
- helping financiers better understand the impact of efficiency investments on the bottom line in manufacturing; and,
- providing the resources available to reduce the perceived risk inherent in such loans.

Background—Why a Toolbook and What Types of Information Does it Offer?

Manufacturers face a number of barriers as they seek to modernize and remain competitive and they often feel isolated in their quest for the support they need to address these hurdles. However, they are not alone in their search for financing and technical assistance. Many companies, in numerous sectors, and in all types of situations have overcome them. This toolbook intends to build on these successes and provide a range of information that can help manufacturers address these problems.

What Is Really Out There?

A multitude of private financing sources are out there, ranging from traditional banks to energy service companies (ESCOs) to venture capital “angels”—wealthy individuals looking for an innovative way to invest. However, manufacturers typically have little contact with such sources, and may not even be aware of them. Billions of dollars worth of Federal and State financing resources are also available through a number of programs—but ***manufacturers must get a sense which are most appropriate and gain an understanding of how these programs work. They must also be able to show that their needs coincide with program missions and that their needed projects can be shaped to meet program eligibility requirements and award criteria.***

Not all manufacturers will need, or be interested in, all of the information offered in this toolbook. This reflects their diversity as well as the different barriers they face. The following description of the sections is intended to help direct readers to those sections that will be of greatest use to them.

What Will This Toolbook Do For Manufacturers?

This toolbook is designed to help manufacturers work through key issues and alternatives relating to financing manufacturing modernization. Some manufacturers may choose to read the entire document, to get a full flavor of the barriers to and opportunities for financing efficiency and other improvements. Others will want to concentrate on different types of available assistance, such as loan guarantees or equity capital, in order to learn what resources could best fit their needs. Still others will want to use the toolbook to gain a firmer grasp of the rationales behind certain lender decisions, or to decide which private financier may be best suited to their situation. In any situation, the toolbook can help manufacturers advance their efforts to become more efficient and more competitive. Manufacturing matters!

What Is In the Toolbook?

The Toolbook is divided into the following six sections:

Section One

The Background section sets the stage for financing manufacturing projects and provides an overview of public and private financing resources and private lender concerns. It explains the types of financing manufacturers need at various stages in their evolution and types of public-sector tools suitable for manufacturers—debt, equity, tax incentives, and grants—and key factors affecting the use of each.

Section Two

Financing Options, Techniques, and Strategies describes the types of financing for manufacturers to consider and lists the various methods manufacturers can turn to for financing help including:

- Federal or State assistance;
- commercial loans;
- lease-purchase or vendor financing programs;
- energy services or shared savings contracts;
- utility rebates or incentives;
- company cash flow; and
- equity financing.

Section Three

The third section provides case studies which show the modernization process from the assessment stage to the financing stage. The specific technology upgrades are discussed and their costs, payback, and energy savings are shown.

Section Four

The fourth section focuses on more than a dozen Federal financial and technical assistance programs, focusing on key offerings of the Department of Energy's Office of Industrial Technologies and the Small Business Administration which manufacturers have found to be effective. These are profiled in detail and include

- program objectives or mission;
- the services they offer and what they cost;
- who's eligible and how to apply;
- conditions and considerations—how the programs work in practice;
- pertinent program data (such as top participating lenders or level of energy savings achieved); and
- regional and headquarters program contacts for more information.

Section Five

The fifth section is a State-by-State look at financing and technical assistance programs best suited to meet the needs of manufacturers within this region. Programs are briefly profiled and a contact given.

Section Six

The last section consists of information provided by participating organizations describing their operations and the types of financial or technical services they provide to advance manufacturing modernization and efficiency initiatives within this region. Participating organizations include

- private lenders;
- financial service providers;
- utilities;
- nonprofit development organizations;
- State and local agencies;
- Federal agencies.

What Are Some of the Financing Issues Manufacturers Face?

Adequate amounts of investment capital at affordable terms are necessary if manufacturers are to modernize and compete. Plenty of capital is available nationally, but many manufacturers have trouble gaining access to the money they need at affordable rates. This is especially true for small producers who often have great difficulty in securing financing. Many cannot obtain capital either for long-term investments in plant and equipment or short-term funds for materials to build inventory.

In addition, the normal problems associated with underwriting reviews of loan applications are complicated by several factors, including:

- lender uncertainty about the viability of proposed production process-related changes;
- lender adversity to operations involving new technologies that the bank has had little experience evaluating; and,
- the environmental uncertainties that many lenders associate with manufacturing projects (in terms of lender liability and collateral devaluation).

Why Do Lenders Operate This Way?

Financing institutions typically limit their lending to low-risk propositions, so manufacturers may have more success in the money markets if they understand the reasons why lenders operate the way they do. One of the most important reasons is lenders' concerns over how their own regulators will view the viability of their bank operations and lending practices. The Federal Office of the Comptroller of the Currency and other bank regulators have laid down specific loan performance criteria for lenders to meet, and no financial institution wants the stigma of too many bad or "nonperforming" loans.

In practice, this means that lenders are most comfortable with certainty, with things they know, and processes they understand. As a result, many often view innovations or new technologies as situations to be avoided in favor of other types of lending. Many small manufacturers, in fact, are not able to land long-term capital or construction loans at any price; they are viewed as too risky. Their owners often lack enough collateral to meet underwriting requirements or enough cash to meet loan processing costs and environmental assessment requirements. While product development initiatives, new technologies, and efficiency improvements receive a lot of attention from public and corporate leaders, they often are viewed skeptically by bank underwriters, who may finance only a fraction of the project's value—if they offer any capital at all. Innovative projects without a record of success and certainty often do not compete well in financial markets because lenders, looking to their own bottom line, are not sufficiently convinced that they will be repaid.

Individual institutions determine their own lending procedures to avoid this stigma, and these procedures vary. Some lenders have developed a speciality and an in-house expertise in certain types of lending, such as manufacturing equipment and facilities. Because they understand the needs, the practical risks, and true nature of collateral value in such circumstances, they are likely to be much more receptive to a loan request from an industrial company than a financier that focuses on shopping centers or commercial businesses.

What Kinds of Financing Do Manufacturers Need?

Manufacturers face different types of financing needs as they go through various business cycles and as their companies evolve. ***Manufacturers need to recognize these variations, so they can devise the right approach for seeking financing, pick the right lender to approach for assistance, and make their best case to loan reviewers.*** No matter what type of operation or its location, manufacturers must secure several types of credit to do business.

- **Short-term loans**, made for less than one year, cover immediate production costs; such loans are available only if the business can generate the cash flow to redeem them during the same period.
- **Working-capital loans** purchase raw materials or help a company operate after sales are made but before payments are received; they are absolutely essential for most small and medium-sized manufacturers, which typically lack a cash-flow cushion. (ESCOs and performance contracting can meet this type of need.)
- **Equity investment**, venture capital-type funding, makes available the block of capital needed for major capital projects such as new product development; venture investors typically take a portion of the company in return for their investment, usually in the form of stock.
- **Long-term loans** purchase capital equipment, and construct or rehabilitate production facilities; generally they are repaid in installments over a period pegged to the life of the assets.
- **Lines of credit** are loans that banks make available up to a prearranged level for a short time (usually 90 days); usually secured by accounts receivable, lines of credit help overcome cash shortages resulting from the normal delays when customers process invoices and send payments.

Finally, manufacturers that produce for foreign customers will have to be able to secure letters of credit. These are, in essence, a type of commercial loan used to finance international transactions involving the shipment of merchandise.

How Can the Public-Sector Help?

What do State programs do, and how can they help manufacturers gain access to needed financing? Several Federal agencies and nearly all States have devised financing tools to help manufacturers gain access to the money they need for efficiency and production process improvements. Some of these tools are relatively simple, like loan or grant programs; others are quite sophisticated, such as equity investment initiatives. The structure of these tools vary; some offer direct financial assistance while others provide indirect incentives via the tax code.

Manufacturing needs are as diverse as the industrial sectors they represent. Therefore, no one “best” public sector financing approach will fit all modernization and energy efficiency needs. As indicated below and in Section 4, the options are many. ***Manufacturers need to remember that while their common mission is linking companies to necessary resources, their goals and strategies will differ, and this may affect the choice of tools.*** Public programs are designed to meet one or more of the following goals to help make projects work, including:

- Reducing the lender’s risk, making capital more available by providing incentives such as loan guarantees to attract private lender participation;
- Reducing the borrower’s cost of financing, for example, by making capital more affordable with reduced interest rates or by using assistance programs that reduce loan underwriting and documentation costs;
- Improving the financial situation of the manufacturer seeking financing, by providing incentives such as tax credits or abatements that can help improve the project’s cash flow; and
- Providing greater comfort to lenders or investors, through technical assistance information or programs that show that planned improvements will yield the benefits they claim.

Manufacturers need to know where to look for help. At the Federal level, some financing tools are administered directly by Federal agencies; others by authorized private development companies or similar organizations; still others by local development agencies or nonprofit institutions or corporations, in accordance with Federal rules and in conjunction with Federal agency partners. Similar variations are found in State programs.

Types of Financial Assistance

The financing tools available to manufacturers take many forms, but four types predominate: debt, equity, tax incentives, and grants. Different tools are best suited to different needs, and *manufacturers need to understand these variations in order to come up with the best fit with their financing needs.*

Debt—Loans, Loan Guarantees, and Other Tools. Most public assistance to manufacturers seeks to make financial resources more available to businesses through loans, loan guarantees, and various types of interest subsidies. *Manufacturers should recognize that the general goal of all these programs is this: to make loan capital more available at the best rates and terms possible.*

At the same time, manufacturers need to understand the context in which all these programs operate, namely, that they are usually available to all qualifying businesses, no matter what sector of the economy. Most programs only limit company participation on the basis of size (usually, number of employees or annual sales).

The Small Business Administration (SBA) is the leading Federal agency in this arena; many States have similar programs in place as well. These programs either subsidize the cost of capital or help ensure its availability. Typically, rates of interest are at or below prevailing market rates, depending on the program's objectives and constituency. These debt programs often are used to help attract capital for expansion projects or general business operation. They also seek to support promising firms that private lenders view as high risk, as well as otherwise solid companies unable to meet standard commercial lending terms.

Depending on the specifics of any given program (i.e., what's eligible for assistance, private match required, etc.) manufacturers can use them for a variety of business capital needs—financing building construction, acquiring equipment and machinery, funding plant expansions, or supporting export activity. Some programs meet a company's need for working capital, chronically in short supply for smaller manufacturers. In recent years, SBA loan guarantees have helped a number of manufacturers who needed capital to incorporate new technologies or make important efficiency improvements.

Debt programs are designed to improve the availability and affordability of capital. *Manufacturers need to realize, though, that most public program officials follow their own guidelines to minimize risk, and these may be rigid as well.* They are accountable to State or Federal agency oversight, and are just as concerned about business failure as their private-sector counterparts. Therefore, to the extent, they can, *manufacturers need to shape their requests for financial assistance to meet the requirements of the program being considered.* As a result, capital access remains a problem for many new or small operations, despite considerable State and Federal attempts to improve it.

Although debt financing is the primary Federal financing approach, and well suited to many situations, *manufacturers need to realize that debt programs will not work in every case.* Loans and loan guarantees may not fit with the financial needs of various new or expanding business situations, modernization or efficiency improvements, or of manufacturers engaged in technology-related projects. Many such firms, while economically sound overall, have initial cash-flow difficulties, and debt programs require a constant stream of repayments beginning almost immediately. Manufacturers trying to modernize or diversify often must borrow considerable sums to invest in production facilities and equipment. As small manufacturers are only too well aware, many small firms fail—not from lack of demand for their products or services—but because they cannot meet debt installments. The time lag on accounts receivable, for instance, can cause an insurmountable cash-flow barrier for small businesses.

Equity. Equity-finance programs can address concerns over cash flow, because they do not feature a strict repayment schedule. Equity programs make capital more available through direct investment (and a potential return based on the success of the company), rather than by lump-sum loan proceeds (which must be repaid in installments). They promote development by investing funds in capital-poor but otherwise competitive enterprises, many of which are technologically innovative. Equity programs on a significant scale are a relatively new public-sector financial assistance phenomenon. A few States have explored venture capital-style assistance programs. At the Federal level, only SBA's Small Business Investment Company (SBIC) operates as an equity assistance program.

In terms of equity programs, *manufacturers need to realize that, in practice, SBA and similar State programs makes equity investments much like a private equity investor or venture capitalist.* SBA and its program partners—licensed Small Business Investment Companies (SBICs) are looking for deals that work. Investors, (in the case of SBA programs, through the SBICs), take an ownership interest in a company in exchange for funds. Equity is a riskier channel of investment than debt. If there are no profits or the business folds, the investor makes nothing or even loses its money. On the other hand, if the company does well, the investor (private, State or SBIC) can reap a substantial return.

Equity programs operate more like a stock purchase than a debt investment, structured to give a company relief from redeeming its obligation until a certain level of return is reached. In contrast to debt financing, equity usually is more “patient” money. Because returns are a function of profit, and profit is linked to the company's success, they are not expected immediately. The timing and size of payments are geared to the company's financial condition, thus removing early cash-flow pressures and giving the firm time to use its cash to advance restructuring or modernization efforts. At the same time, though, investors usually expect a greater return on an equity investment than traditional lenders do from loans.

Tax Incentives. The only significant Federal tax incentives specifically targeted to manufacturers are tax-exempt industrial development bonds (IDBs) which can be used for a variety of financial needs including site preparation and equipment acquisition. IDBs are available in every State, and each State sets its own eligibility conditions and authorizes its own set of issuing entities; typically, they include State agencies, local governments, development authorities, and similar organizations.

State and local governments offer most of the tax incentives to promote manufacturing activity, including abatements, investment incentives, exemptions or moratoriums for capital improvements, and incentives for job creation. State and local tax incentives often are linked to or packaged with Federal financing assistance. They are offered on the premise that reducing taxes lowers the cost of doing business in an area, making it more attractive for companies to locate there or to maintain or expand existing operations. The latter rationale often is cited when long-time manufacturing companies seek help to retool. Thus, ***manufacturers can make a stronger case for State and local tax relief or tax-code linked assistance by showing the community impact and local benefits of their proposed project.***

Grants. Many manufacturers, when they decide to seek public financing assistance, think of grants. Grants are direct transfers of money to the recipient, usually with no payback obligation. ***Manufacturers need to know that little direct grant assistance is available, and the competition for it is fierce***—and not just from other companies, but also from health care facilities and social service organizations. The average grant dollar amounts for each project are kept as low as possible because grants are designed to help leverage other sources of financing. Many grants are cost-shared—requiring financial commitments from grant recipients. Most grants are done as “pass throughs”—funds are provided to an intermediary, such as a city or development organization, which, in turn, provides funds to the private company. Virtually all Federal grant assistance is delivered this way.

In short, ***manufacturers can tap several types of public resources***, and use them in a variety of ways to help finance manufacturing efficiency and modernization projects, develop new technologies and products, and help attract private investment. ***The most suitable approach depends on the specifics of any given program, the current development climate in a given area, and the financial requirements of the companies wanting to carry out improvements.*** It is limited only by the creativity of the participants.

Financing Options, Techniques, and Strategies

What Types of Financing Should Manufacturers Consider?

Manufacturers seeking financial assistance to improve their energy efficiency, production processes, and overall competitiveness have an array of financing options to choose from, including:

- Federal or State financial assistance;
- commercial loans, including those backed by Federal or State guarantees;
- lease-purchase or vendor financing;
- energy services or shared savings contracts (through ESCOs);
- utility rebates or incentives;
- equity financing (including stock sales) and venture capital.

Manufacturers need to remember that the most appropriate approach will vary, company by company, depending on a number of factors, such as the size of the operation, nature of investment needed, primary purpose of capital proceeds, cash flow situation, and/or financial health of the company, etc. This section will lay out these options, and highlight a few special considerations.

Federal or State Financial Assistance

The Federal Government offers several loan and loan guarantee programs that manufacturers can tap to support energy efficiency and production modernization activities. Nearly all of these are general business development assistance programs that manufacturers—along with commercial and service enterprises—are eligible to use. The *Federal Programs* section of this Toolbook is devoted to Federal assistance programs. Each description includes program specifics such as:

- basic program objectives and description;
- eligibility and application process;
- services available, and their cost; and,
- regional and headquarters program contacts.

Only one Federal financing initiative—tax-exempt industrial development bonds—is targeted exclusively to manufacturers. Therefore, *the challenge manufacturers face when contemplating use of Federal or State programs is linking their specific financing needs with broader program criteria, and building a competitive case for their applications.* Federal technical assistance programs, also profiled in the *Federal Programs* section, can prove useful in this regard.

Every State offers a host of financing programs applicable to manufacturing needs, although few of them are reserved exclusively for manufacturing use. Accordingly, ***manufacturers must figure out how to make the fit between State program requirements and their own needs***. The *State Programs* section provides brief information on the most suitable financial assistance efforts offered by States within this Department of Energy region, along with contacts and other pertinent information.

Commercial Loans

Firms seeking funds in private lending essentially compete with one another. Lenders scrutinize the risk and potential rate of return each deal offers. Based on this assessment, companies gain or are denied access to capital. The cost of capital will be lower to those with lower risk and higher return, while more expensive capital, or none at all, will go to those with higher risk and uncertain return.

The majority of commercial loans made to industrial companies are used to purchase inventory goods or raw materials, and typically the term on them is for one year or less. These are also known as working capital loans. These are typically secured by accounts receivable or the materials they acquire. Established manufacturers usually have little difficulty getting such financing.

Manufacturers periodically need to borrow money for longer terms, up to ten years (or even longer), to finance new equipment, more capital-intensive efficiency improvements, or building renovation or acquisition. These loans are often more difficult to secure, for reasons noted in the prior section.

In addition to its discussion of various types of financing, this section of the Toolbook will also focus in-depth on issues of risk and other factors that affect commercial lenders' willingness to provide financing to manufacturers.

Many lenders are more inclined to provide money to manufacturers if they can gain the extra comfort afforded by a loan guarantee. At the Federal level, the Small Business Administration (SBA) may participate in loans for these purposes. ***Manufacturers should keep in mind that SBA typically guarantees up to 90% of the principal balance of loans up to \$155,000, and 85% of loans up to \$500,000, to make them more acceptable, and less risky, to participating private lenders***. SBA assistance usually comes with more advantageous terms than purely private loans—longer loan maturities (seven years for working capital, ten years for equipment, and 25 years for fully amortized real estate); and greater debt-to-equity ratios (often 4:1). And in recent years, SBA has worked to reduce paperwork requirements and loan processing times. However, ***manufacturers must realize that SBA loans are not giveaways; they require adequate collateral and personal guarantees from company owners***.

SBA has designated several hundred lenders from around the country as Preferred Lenders; these banks have expedited decision-making authority delegated to them by SBA.

Manufacturers should identify SBA-designated preferred lenders in their local area.

Manufacturers should also note that SBA-backed loans are not necessarily cheap money; rates range from prime-plus 2.25% to prime-plus 2.75%. More information on SBA programs may be found in the *Federal Programs* section of this Toolbook. Finally, ***manufacturers should remember that SBA is not a monolithic institution, but rather an agency that operates in large part through the private banking system. Thus, if one SBA lender decides not to finance a project, another one might; while SBA's basic qualifications are uniform, the specific lender's underwriting criteria may vary.***

Lease-Purchase or Vendor Financing

Most manufacturers are familiar with the leasing concept. Leasing can be an attractive financing option to use to get new equipment. For many companies, in practice, leasing is a way for them to borrow money without putting any liabilities on their balance sheet. In the case of energy-related project financing, the energy efficiency savings realized from new equipment—the bottom line impacts on the electric or gas bill—usually can offset the lease payment. This will result in a positive cash flow situation for the company. Sometimes the value of the equipment and the cost of its installation is amortized over the term of the lease, making its eventual acquisition by the lessee more affordable. In many cases, the lease term is shorter than the useful life of the equipment; most such leases include a purchase option pegged to the fair market value at the end of the lease. ***Manufacturers should explore the two types of lease arrangements that are typically available.*** The right choice will depend on a number of factors, ranging from the cost and type of equipment needed, to the anticipated shelf-life of the equipment, to the company's tax situation.

Manufacturers must recognize that the cost and length of available lease terms will depend on both the equipment itself, as well as the manufacturer's own creditworthiness. Reasons for the latter are similar to those of conventional bank financing. In the case of the former, the equipment's life span and potential for resale will influence the terms and costs of the lease. Operations characterized by rapidly changing technologies will find equipment more expensive to finance than will companies using more durable equipment with longer staying power.

1. **Finance Leases** are essentially installment purchases. ***Manufacturers pursuing this option will need little or no initial money to purchase the equipment.*** The lessee company is considered the owner of the equipment for tax purposes, and is entitled to take deductions for depreciation and the interest portion of the payments to the lessor. Finance leases may be offered by leasing companies, ESCOs, suppliers, installation contractors, and utilities.

2. **Operating Leases** are also known as vendor financing. In this scenario, the lessor owns the equipment and leases it out for a pre-determined contract period. In some cases, vendor financing companies finance one type of equipment, or serve a specific industry. In other situations, the lessor is the maker of the equipment being acquired. *Manufacturers should explore these lease financing options, since these companies understand the equipment best and typically offer the best terms.* In the case of energy efficiency equipment, *the vendor often guarantees that the customer/manufacturer will pay no more for the lease than the energy savings it generates.* Vendors, on occasion, may act as an ESCO and offer a broader range of services. The lessor takes the tax benefits, and the lessee writes off the lease payments as a business expense.

Lease financing options offer several advantages over conventional bank financing:

- the entire cost of the property or equipment is financed (and many lease payments can be structured to also include soft costs such as installation charges and license fees);
- company constraints on taking on new debt or using lines of credit can be circumvented, and (in terms of company accounting) debt-to-equity ratios are decreased and current level of financial liabilities reduced;
- more flexible payment schedules can be structured (for example, to reflect seasonal business cycles);
- more advantageous tax treatment (i.e., a lease is treated as an operating cost that can be expensed rather than as a capital investment recoverable over a longer period of time).

From a practical operations standpoint, leasing also allows manufacturers to determine the usefulness of equipment before investing in it. In addition, plant managers will find that leases make it easier to upgrade production equipment as improved versions are introduced.

This approach also carries several disadvantages:

- contracts may carry penalties upon cancellation, an important consideration if the equipment becomes outdated before the lease expires;
- higher real cost of acquisition, after taxes, when payments over the total term are considered;
- no ownership value of the property or equipment at the end of the lease term, even if value remains;
- cost of removal usually borne by lessee if the equipment is not purchased or leased again at the end of the lease term;
- loss of certain tax advantages such as accelerated depreciation.

Energy Service Companies (ESCOs) and Shared Savings Contracts

ESCOs provide energy efficiency improvements and energy management services to companies, and get paid out of the savings realized from the improvements. Unlike many traditional vendors, most ESCOs do not require or expect any cash up-front for the energy efficiency measures they acquire and install on behalf of participating companies. This makes ESCO projects especially attractive for companies where cash flow or environmental concerns make traditional financing hard to get or much more costly to secure.

Utility Incentives

Some electric utilities offer incentives such as rebates to help their manufacturing customers reduce the initial cost of energy-efficiency improvements. With a rebate, the utility reimburses the company for some portion of the cost of implementing or installing the improvement. Depending on the utility program rebates they may be based either on the actual cost of the improvement or on the level of energy load reduction.

Some utilities offer different types of incentives. For example, they may cover some or all of the cost of installation of energy saving equipment. Utilities may help pay for technical plant assessments designed to uncover opportunities for enhanced energy savings, pollution prevention, and larger productivity gains. They may also offer low-interest financing for energy efficiency projects. ***Manufacturers should contact their utility account representatives to identify the types of incentives that may be available, their cost, and the level of financial support that may be available to carry out projects.*** Utilities almost always require projects to show some link to energy efficiency as a condition of offering assistance. Therefore, ***manufacturers need to think creatively about operation improvements in the context of energy efficiency.*** Some manufacturers, in areas as diverse as rural Iowa and Boston, have demonstrated how creative that link can be—getting utility financial assistance for projects ranging from plant layout to toxic waste minimization by showing the energy efficiency connection.

In addition, ***manufacturers need to be aware that the electric utility industry is in an era of uncertainty,*** as Congressionally mandated deregulation starts to take hold. Eventually, every electricity user will be able to choose his service provider, from any place in the country. For the utility, this means placing much greater emphasis on customer service, to maintain their existing client base and guard against customer raids from other utilities based in different parts of the country. For the manufacturer, deregulation could mean the loss of rebates and traditional types of utility assistance, as utilities explore more effective marketing strategies. On the other hand, many energy analysts see manufacturers in a position to benefit from the upheaval in the electricity industry. ***Deregulation could prove beneficial for savvy manufacturers wishing to use their energy needs as a negotiating tactic to gain financial or technical assistance.***

Deregulation could give manufacturers:

- the ability to explore new, better, and more tailored assistance packages from current energy providers, who are seeking to retain the manufacturer as a long-term customer;
- the ability to encourage utilities to provide better technical assistance, and links to ESCOs and other financial providers to make improvements, as part of a long-term service agreement; and/or,
- reduced rates, many believe, over the long haul.

Venture Capital or Equity Financing

Equity financing, or venture capital, is by nature risk capital. Venture capitalists are investors who are not interested in a company's collateral assets; they are hooked by a company's potential cash flow and the profits their investment will generate. Their profit is derived from their part-ownership, or equity position, in the companies they support.

Manufacturers need to shed their common perception that venture capital only lands in high-tech arenas; in fact, venture capitalists will invest in any company in any sector poised for big growth and significant profits. Venture capitalists take big risks, and they expect big returns.

Venture capitalists fall into two categories: *traditional* and *informal*. Traditional venture capital firms are typically partnerships capitalized by large institutions, such as private or public pension funds, major corporations, or insurance companies. ***Manufacturers need to realize that, in practice, traditional venture capital opportunities may be limited, since traditional venture capital firms historically fund less than one percent of all companies seeking assistance.*** Many traditional venture firms focus on existing companies with considerable growth potential, or on the leveraged buy-out of strong companies.

The bulk of available venture capital comes from informal sources, typically, the so-called "angels" (wealthy individuals with money to risk). A network of informal venture capital intermediaries has sprung up to link angels with promising deals; this network includes investment bankers; financial consultants; loan brokers; and venture capital clubs. SBA is developing a new computerized system, called ACE-Net, to link small companies and private angel venture investors. (See the *Federal Programs* section for more details.)

Manufacturers need to know that a key constraint to finding informal venture capital is not necessarily the nature of the project itself, but the simple lack of information about who has venture capital to invest, how they want to invest it, and where it is.

Venture capitalists are driven by the goal of making a lot of money, and they rarely make their investments on purely objective reasons. But companies that gain resources commonly:

- offer a proprietary product or service;
- feature significant potential for growth (many traditional venture investors look for at least \$50 million in product revenue) within a definable time period, usually five to ten years;
- demonstrate the potential for a high return to investors—most venture capitalists demand an average of at least 20% annually over the life of their investment;
- feature strong, able, and creative management teams;
- are able to define a clear “exit strategy” for the investor, typically, through sales of stock.

SBA’s Small Business Investment Company program (SBIC) provides traditional equity financing to small businesses. (See the *Federal Programs* section for more details.) SBICs are owned by investment groups, other companies, and often by banks. Banks often participate in SBICs because this provides them with a way to become involved with potentially more lucrative venture capital projects, and offers them an institutional mechanism to serve companies that normally would not qualify for conventional loans in their commercial loan departments. Thus, ***manufacturers refused conventional financing should inquire if the bank participates in an SBIC.*** SBICs are at the root of success for many companies who have made it big, including Apple Computer and Federal Express.

Conventional Lenders and Risk: What Influences Their Approach to Manufacturing Projects?

What do manufacturers need to know about their lenders? Various factors affect any given lender’s basic view about financing manufacturing projects. Therefore, industrial manufacturers must know their lenders. When seeking financing for energy efficiency or process improvements, they should try to determine the following:

- the lender’s **market policy-making structure**—are they a local bank with purely local interests, are they a National bank with policies set in a distant home office, etc. This will influence the lender’s flexibility and approach to specific local situations.
- the lender’s **sphere of activity or market niche**—is the lender’s focus primarily on commercial projects, multi-family housing projects, shopping malls, or industrial projects; determining this will offer some sense of the lender’s receptivity to manufacturing modernization and energy efficiency projects.

- the lender’s **level of sophistication and knowledge** base—the more the lender knows about and understands industrial facility issues and needs, the more willing they are likely to be to finance such projects.
- the lender’s **past experience** in financing similar modernization and energy efficiency projects—financiers who have undertaken such projects are less likely to be swayed by horror stories and more likely to be open to this type of loan
- lender “**trigger**” **issues**—the types of red flags that will dissuade it from lending, such as past problems with collateral disposition or adequacy of value, etc.
- lender’s **comfort level with new technologies**, and its internal capacity to understand how new technologies can work and how likely it is to achieve the projected benefits.

In short, *manufacturers must remember that rejection by one lender may only reflect that financier’s view of the risk involved with that sector or technology, and not the broader credit-worthiness of the applicant.* Therefore, manufacturers should seek out lenders that may be a better fit with the project needing financing. In addition, *manufacturers need to realize that their loan applications may be “victims of circumstances”*—assigned to an overly-conservative loan officer, assigned to a loan officer with little clout within his or her institution, or submitted to a bank at a time when it is bumping up against its own loan limits and, consequently has tightened its lending standards. A creative loan officer, and an aggressive bank, can find ways to make loans work.

What are the faces of Risk?

Risk—ways to quantify it, avoid it, and manage it—is the number one concern of lenders. As they consider it, many bankers follow the credo of the so-called “*Five Cs of credit*,” namely:

- **Capacity** to repay the loan, determined through a company’s financial statements (which many lenders report are typically poorly prepared); bankers like to see evidence of a consistent increase in profits and retained earnings devoted to the business;
- **Collateral** offered to secure the loan, and evidence that the collateral (such as equipment or real estate) will hold its value for the duration of the loan;
- **Capital** on hand—the company’s liquid assets or cash-on-hand; lenders also find it attractive if the owner has a good net worth-to-debt ratio;
- **Conditions**—special situations or extenuating circumstances that could impact the borrower during the life of the loan; and,
- **Character**—borrower’s reputation for integrity and forthrightness (in presenting information to underwriters, the position in the community, and similar types of intangibles).

Within these parameters, the decision-making process is a fluid one within any given bank, in the context of loan officer interpretations, the reputation of the loan officer (within the bank) who may be handling your loan request, the nature of the bank loan committee and their comfort with basic data presented, and so forth.

Manufacturers must remember that, in the final analysis, the key factor is risk—the chances that problems are likely to arise with a project, relative to the potential payoff for the lender. Risk may take many forms, depending on the financial institution, its perceptions of various manufacturing situations, and the specific circumstances of the individual manufacturing project. ***Manufacturers must realize that, in the case of projects involving new process equipment or new technologies, the nature of the risks that lenders fear as they consider loan applications fits into one of the following categories:***

- the equipment or technology will not perform as promised, undermining the ability of the manufacturer to repay the loan based on predictions of that performance;
- the equipment or technology is so tailored to the specific borrowing company that it will not be marketable to others and that its purchase price will not be recovered in the event of a foreclosure (even accounting for normal wear and tear);
- basic concerns over environmental liability, prominent in many heavy industrial manufacturing sectors (such as printing or metalplating), will translate into one of two situations, either (1) the lender will not be able to gain liability-free access to manufacturing facilities to reclaim equipment used as collateral in the event of default, or (2) borrowers will be saddled with environmental cleanup costs and their ability to repay the loan may be jeopardized.

Numerous factors affect any individual lender's decision whether or not to lend to manufacturers seeking to finance equipment acquisition or capital improvements related to competitiveness. ***Manufacturers must recognize that some of these factors will be out of the prospective borrower's control and may not even be relevant to the specific loan request at hand;*** some lenders clearly follow the "once burned, twice shy" philosophy when dealing with projects in certain industrial sectors. Therefore, ***manufacturers often have to make a considerable effort to educate their lenders on the nature of their industry and the scope of the project they propose to undertake.*** In many cases, they are not successful in establishing a necessary level of comfort. Thus, ***manufacturers are encouraged to try other lenders if the first one they approach rejects their application.*** Technical information available through the Department of Energy and various State programs can prove valuable in this regard.

What Types of Manufacturing-related Risks do Lenders Most Often Consider?

Most lenders are traditionally conservative in their lending policies, often because they feel that their own regulators place them in that position. This varies for a number of reasons, but the size, specialty, and expertise of a given institution plays a key part. For example, some financial institutions focus on certain types of commercial lending; others may be much more open when considering loan requests from manufacturers. Some lenders are much more versed in environmental issues. Moreover, within a specific institution, some loan officers are more conservative than others, for a variety of reasons. ***Manufacturers must not forget that some lenders simply do not understand various manufacturing technologies and processes.*** And no bank officer wants to be party to a bad or “nonperforming” loan. The fact of the matter is that manufacturing loans are perceived—rightly or wrongly—as having a greater chance of going awry than most other types of lending.

Lenders concern themselves with various types of risk, but how a manufacturer addresses the following three types will be crucial in a lender’s decision on a manufacturing project loan request.

1. **Basic credit risk**—the likelihood that the borrower will be able to make payments. Lenders address this risk by looking at the credit rating and financial situation of the borrower, to review such factors as past record of loan repayments and current debt to income ratios.
2. **Collateral risk**—the possibility that the lender will not be able to recover the loan amount due in the event of foreclosure because of a decline in collateral value (with manufacturing equipment, these concerns arise because the equipment is not viewed as marketable to others at a sufficient price).

Manufacturers need to know that lenders confront this risk in two related ways: (1) by minimizing the value of the collateral to a level they are comfortable with (in the case of equipment, this may involve reducing its value to scrap value); or (2) by reducing the loan-to-value ratios they will accept for the project to a level they feel addresses the uncertainty. For equipment loans, this means, in practice, that lenders might only provide 20 or 30% of the purchase price, rather than the 70 or 80% that they might loan in other situations.

Manufacturers must remember that loan-to-value is an important concept in financing, and is especially key in evaluating potential risks in manufacturing loans. Basically, the smaller the loan request relative to the size of the overall project, the lower the loan risk to the lender, and the more likely the loan is to be approved. This boils down to a simple cash flow issue; the profits that manufacturers would earn from their own investment in the project could be shifted to cover the loan payments if that became necessary. In practice, this may mean that if manufacturers have limited cash to commit to a modernization strategy, they might be better off tackling initial segments, rather than a major effort. Thus, the gains from the initial investments can be used to make subsequent projects less risky and more bankable. In this way, it may be possible to get financing for a greater share of the purchase price; in the example above, perhaps 40% instead of 20% or 30%.

3. **Liability risk**—lender’s concerns that they will somehow be exposed to environmental risk for contamination if they move to claim collateral at a facility where production results in environmental contamination.

Lenders have interpreted the rulings in several court cases in the 1990s as particularly onerous barriers. In one instance, the manner of removing equipment used as collateral from a bankrupt manufacturer triggered Superfund liability. Lenders want to avoid such situations at all cost, and many do so by simply not lending to such companies.

Manufacturers must remember that, to overcome lender concerns, they usually must provide environmental assessments and other detailed information to their banks about the condition of their facility, the nature of their production, and their waste disposal plans. All of this drives up transaction costs considerably.

Manufacturers may be able to circumvent environmental fears over collateral value for specific equipment acquisitions simply by offering alternative collateral. For example, some banks may accept other real estate holdings, or other assets such as stocks or bonds as collateral for the equipment loan. (In practice, of course, this forces manufacturers to make some hard decisions about what they are willing to risk to secure the loan.)

Finally, insurance products are available that provide lenders the comfort they need when considering loans where environmental risks may be present. However, in practice, such insurance is very expensive (although the costs of typical coverage have dropped by more than a third over the past few years and continue to decline as an actuarial track record in this arena is developed). Currently, policy fees typically make such insurance prohibitively expensive for projects needing less than \$500,000 in capital.

Choosing the Right Lender: Size May Matter

Given the nature of manufacturing lending, prospective borrowers may have to search for the right match between their needs and the inclinations of the prospective lending institution. For example, loan size/complexity and bank size may have to match properly. In some instances, if the needed amount of loan proceeds is small and for routine purposes, the best bet may lie with a small community bank that specializes in tiny loans for projects in the local area. In other cases, where the technology proposed may be complex or relatively new, or a sizable amount of financing may be needed, the right lender may be a large, multi-billion lender with staff expertise and experience in making such loans.

Advantages of small lenders (with less than \$100 million in assets)

- tend to focus on smaller loans;
- market niche is the local area, and they may be more interested in making loans in their immediate community.

Disadvantages of small lenders

- project size may exceed maximum loan amount (while such banks often participate in local lending consortia to meet higher capital needs, working through such an arrangement adds to the transaction costs);
- may be rigid when dealing with contamination concerns (automatically rejecting applications for this reason) or overly conservative when faced with loan requests involving innovative technologies or equipment.

Advantages of large lenders (with more than \$100 million in assets)

- tend to be more open when considering loans involving manufacturing equipment and contamination concerns, because of greater staff expertise and experience;
- can consider larger size loans (because of their size, any individual loan will constitute a small proportion of their loan portfolio, allowing risk to be spread).

Disadvantages of large lenders

- minimum threshold for a loan may be too large for the typical manufacturing equipment loan need (in some cases, lenders have established floors of as much as \$10 million)
- some may view manufacturing loans as too complex, and their servicing too time-consuming (basically, they may have easier ways to make more money, via commercial or real-estate lending).

Other Factors Affecting Lender's Willingness to Lend on Manufacturing Projects

Finally, manufacturers need to know that sometimes, other factors will affect a bank's willingness to finance manufacturing-related projects—even if they have little or no direct bearing on either the specific project or the prospective borrower. They may include the following:

- basic institutional attitude towards certain types of risk—top bank leadership simply decrees that the organization will not finance this type of project;
- the lender's need to make loans—"hungry" banks needing to shore up their level of lending activity may be more willing to finance innovative manufacturing projects than institutions having a number of prospective borrowers at their door competing for limited loan funds;
- the extent to which the lender pursues good ratings under the Community Reinvestment Act and needs to make qualifying loans to maintain those ratings—a factor that can work to the advantage of smaller companies in distressed community areas who employ local, lower-income persons;
- environmental factors.

The latter can have a significant, if more invisible impact on a lender's openness to lending. Historically, many manufacturing operations are viewed as "dirty"—rightly or wrongly—and companies seeking financial assistance must be prepared to prove that they can still meet the 5 Cs of credit and will not compromise a participating lender in terms of environmental liability. ***Manufacturers need to be aware that lenders continue to be very nervous over the prospect of incurring liability for environmental contamination from loans they make.*** While Congress and the Federal EPA have acted over the past year to reduce this risk, many lenders remain extremely reluctant to lend on manufacturing projects. This is particularly true of loans for improvements to long-time manufacturing operations. ***Manufacturers need to be aware that certain types of situations which will raise red flags with lenders, and they could require additional borrower effort to establish the right lender comfort level.*** These include the following.

- use of the facility for what may be viewed as "dirty" manufacturing operations, including those which involve the use of toxic substances, such as cyanide or lead;
- presence of discarded industrial batteries, paints, pesticides, or other chemicals, or waste ponds or lagoons;
- evidence of lead-based paint, asbestos, or underground storage tanks, or transformers, capacitors, or hydraulic equipment that may contain PCBs.

Total Cost Assessment

Pollution Prevention and Energy Efficiency

Until recent years, Federal and State policy and practices at most industrial firms focused on pollution management and mitigation using "end-of-pipe" pollution control regulations and technologies. Although this approach was effective in promoting the first wave of pollution reduction, it was very costly. The next wave of environmental improvement will require pollution prevention and energy efficiency which focus on eliminating the sources of pollution and improving processes and energy efficiency so there will be less need for pollution control measures. Pollution prevention and energy efficiency techniques include substitution away from harmful chemicals, improvements in process efficiency or housekeeping that reduce waste and energy use, or in-process recycling of waste materials. Pollution prevention is also closely related to energy efficiency, which prevents pollution by reducing energy demand in place of increasing energy supply.

Because pollution prevention and energy efficiency focus on process improvements and waste elimination, they involve capital investments and process changes that are often profitable. Avoiding the costs or regulatory compliance, hazardous waste management, energy use, liability, and risks to worker health is simply good business.

Financial Analysis and Total Cost Assessment (TCA)

Financial analysis is the process by which companies evaluate potential investments. Financial analysis assigns an indicator of profitability to each investment option to aid business decision making. Conventional financial analysis methods often neglect indirect or hidden costs, focusing on short-term costs and benefits instead.

Total Cost Assessment (TCA) is an approach to removing potentially unwarranted and misleading financial barriers to energy efficiency and pollution prevention and other related investments. It does so by assisting managers and other staff—research and development, product design, financial, energy, environmental, and operations—to develop a comprehensive financial analysis of the true profitability of environmental investments. TCA differs from conventional project analysis methods in four key ways:

- the inventory of costs, savings, and revenues includes indirect, less tangible items typically omitted from project analysis, such as compliance, training, testing, and liability.
- costs and savings are directly allocated to specific process and product lines instead of being pooled in overhead accounts.
- time horizons for calculating profitability are extended to capture longer term benefits.
- profitability indicators, such as Net Present Value (NPV) and Internal Rate of Return (IRR), capable of incorporating the time value of money and long term costs and savings are used.

Although developed for use with pollution prevention, energy efficiency and other related projects, the TCA approach can be used for the financial analysis of any industrial project under consideration by a firm.

Comprehensive Cost/Savings Inventory

A comprehensive cost/savings inventory is a critical component in carrying out a financial analysis, particularly for energy and environmental projects. For example, a pollution prevention project that reduces the use of a hazardous substance as a raw material, therefore decreasing hazardous waste generation from the manufacturing process, can affect not only waste disposal costs, but also less-tangible items such as corporate or product image, and waste-related liabilities (such as Superfund liability). Analyses often omit these issues because they are problematic, difficult to quantify, or both.

The inventory component of TCA includes as many relevant and significant cost/savings items in the analysis as possible. Starting with the universe of potentially relevant costs and benefits, managers should consider each item for relevance to the project at hand. Some items (such as capital costs and basic labor/materials costs) are obvious and easily

quantifiable. Other relevant items may require more effort to track down the information necessary to attach a dollar figure to the activity. If the best cost estimate is actually a range of costs, sensitivity analysis can determine how much the uncertainty affects the bottom-line profitability of the project.

Although an attempt should be made to evaluate all cost items (including less tangible items, e.g., liability), the same level of analysis is not necessarily appropriate for every item. In some cases, the analysis of a particular item will go further than simply determining that the item is not significant enough to warrant the time and effort that would be needed to rigorously quantify it. It is important to determine not only whether a particular cost item is relevant to the analysis, but also whether the item is significant in comparison to more readily quantifiable capital and operating costs.

Appropriate Cost Allocation

Other relevant cost items may be omitted because of inappropriate cost allocation within the firm's accounting system. For example, environmental management costs, such as labor time for internal waste handling (e.g., manifesting) spill reporting, or compliance planning are often retained in general facility overhead accounts rather than being allocated to the process or product that is actually responsible for the activity. Even when these costs later are allocated back to processes/products for purposes such as product pricing or capital budgeting, the basis for allocation (for instance, amount of raw materials used per production line) may not accurately relate the overhead costs to the actual activity generating the cost.

In general, each cost item contained in overhead should be allocated to processes and products using an appropriate allocation basis. Under Activity Based Costing (ABC), overhead costs are first assigned to activities with a direct relationship to cost generation; these activities are in turn allocated to processes and products. This two-stage technique facilitates selection of appropriate allocation bases, and provides valuable information for managing overhead costs. Although ABC is typically applied to a facility-wide or company-wide managerial accounting system, its methods and concepts are also valuable for capital budgeting.

Long Analysis Time Horizon

Total Cost Assessment takes into account costs and benefits that accrue over the life of a project. The relevant time horizon could be, for example, the expected lifetime of the equipment purchased. For projects with very long expected life (15 to 20 years or more) a time horizon of at least 10 to 15 years enables the analysis to capture costs, savings, and revenues that occur in investment out-years, such as recurring waste disposal savings or future avoided liability savings. Unfortunately, many companies restrict capital budgeting to time horizons of 5 years, 3 years, or less.

Profitability Indicators and the Time Value of Money

When summing costs and benefits over many years, it is important to recognize that cash flows in the future are less valuable than cash flows of the same magnitude in the present. In a large part, this is because a present cash flow can be invested (for example, in Government bonds) to yield a greater value in the future. This preference for receiving cash in the present is reflected through a discount rate—for most companies, the operative discount rate is their weighted-average cost of capital.

Profitability indicators, such as Net Present Value (NPV) and Internal Rate of Return (IRR), use the discount rate to appropriately value out-year cash flows in terms of present-year dollars, by contrast, other indicators such as simple payback neglect both the time value of money and out-year costs/ benefits, both of which may have a significant impact on the analysis.

CASE STUDIES IN ENERGY EFFICIENCY AND POLLUTION PREVENTION EXCELLENCE

Case Studies

This section presents case studies in the order that they appear in the workshop.

- **A. FINKL & SONS Co.**
- **AAP ST. MARY'S**
- **DECATUR FOUNDRY, INC.**
- **QUAD/GRAPHICS, INC.**
- **PONDERAY NEWSPRINT COMPANY***
- **NISSHINBO, CALIFORNIA, INC. - ENERGY CAPITAL PARTNERS***
- **WACKER SILTRONIC***
- **TOP VENEER & TRADING CO., LTD. - HELLER FIRST CAPITAL***
- **TRAILBLAZER FOODS, INC. - THE MONEY STORE & KEY BANK***
- **NAUMES, INC. - PACIFICORP***
- **U.S. BANCORP LEASING AND FINANCIAL***
- **B & G MACHINE, INC. - CASCADIA REVOLVING FUND***

*These case studies were originally prepared for the Portland, Oregon, Innovative Financing Workshop by the U.S. Department of Energy Golden Field Office and Environmental Plus, Inc.

CASE STUDIES IN ENERGY EFFICIENCY AND POLLUTION PREVENTION EXCELLENCE

A. Finkl & Sons

A. FINKL & SONS Co.

INNOVATION IN THE DIE STEEL FORGING INDUSTRY

Introduction

In 1879, German immigrant Anton Finkl started his own blacksmithing firm, the Finkl Forge Co., at Clinton and Monroe Streets in Chicago that would evolve into A. Finkl & Sons and pass down through three generations of his descendants. From a “smithy” that specialized in making high-grade tools for tradesmen, A. Finkl & Sons Co. has evolved into one of the largest and most innovative custom forgers in the U.S. The privately held firm, which employs more than 400 people, is anticipating 1995 revenues of \$80 million. Its products — die blocks for the closed die forging industry, plastic mold and die casting die steels, custom open die forgings, and forge shop and steel mill repair parts — are turned out from a fully integrated steel production facility in the heart of Chicago’s near north side.

The innovative touch that Anton Finkl exhibited more than a century ago has been carried through by subsequent generations and is a major reason why A. Finkl & Sons is widely regarded as an industry leader.

Anton’s grandson William Finkl, who led the company from 1933 until his death in 1984, invented his first patentable product while still a teenager before the first World War — a combustion bulb that determined the amount of carbon in steel faster than any previous technique. Throughout the 1920s, he developed a variety of new processes and steels, ranging from molybdenum-bearing steel (a breakthrough for its strength characteristics) to what would be patented as “FX,” the first successfully water-quenched die block of nickel-chrome-moly steel and the introduction into the 4300 series of steel. Today, FX is still the most successful die block in the business.

William’s son, Charles (Chuck), current chairman and chief executive officer, continued the company’s innovative tradition by developing the vacuum arc degassing (VAD) system. This is a patented process for vacuuming deleterious gasses from molten metal that, if left unattended, would result in cracks and impurities in the finished product. The VAD system today is licensed by Finkl to steelmakers across the world and provides the cleanest air-melted steel.

Today, the Finkl company holds more than 100 worldwide patents on a variety of steels, steelmaking processes, techniques, and equipment.

Energy Efficiency and Productivity

At its plant, Finkl's recycling effort currently reuses or recycles 99.7% of the solid waste generated by the company. It also has won its reputation for leadership by virtue of its ability to respond rapidly to changing market conditions — particularly when those conditions could have negative implications for the industries it serves. For example, in the late 1970s and early 1980s, A. Finkl & Sons was setting new records for production, shipment, and sales volume. But by spring of 1982, the bottom had fallen out of the market and the industry was rocked by the worst recession since the 1930s.

With many customers down to three-day work weeks, the company knew it had to change and reduce its costs in order to help its accounts — and its own operation — survive. Flying in the face of the industry trends of spending and production cutbacks, Finkl launched a continuing long-term capital improvements program to reduce its costs and improve productivity — and thus prove more cost-effective to the industries it serves.

With the addition of new larger machinery, upgrading with computerization of other equipment and building of new and more efficient heat treat and heating furnaces, including the addition of a Vacuum Arc Remelt furnace, the results have been impressive.

Today, A. Finkl & Sons is one of the most efficient and productive forge shops in the business. Among the specific results:

- Total energy consumed has declined 36.4% from 165 therms to 105 therms per ton shipped.
- Production efficiency, in terms of man-hours worked, has doubled.

Pollution Prevention

A. Finkl & Sons is committed to improving its community by reducing its solid waste output. In fact, more than 99.7% of the solid waste it produces is reused in the plant or recycled.

Here are just a few examples of its waste-reduction efforts:

- First and foremost, 100% of the steel the company makes is produced from premium scrap metal.
- In the melt shop, Finkl has extended the life of a furnace and ladle brick by 400%. And when it's time to reline, the company does not throw the brick away; it returns it for recycling.
- In the smooth forge area, the shot used by the shot blaster is delivered in drums. Rather than discarding those drums, the company reuses them as everything from garbage cans to storage containers around the plant.
- Finkl no longer discards the used shot and dust from this operation — instead, it is now charged into the melt furnaces and ultimately leaves the plant as part of Finkl steel.
- The company used to spend a small fortune on wooden pallets for use in the plant and for shipping — today, it reuses pallets throughout the plant and, when they finally fall apart, it sends them to a pallet-rebuilding company.

Does reduce and reuse work? Consider this, the company's waste hauler used to pick up 18 containers of refuse from Finkl three times per week or 54 containers a week. Today, it sends out less than two containers a week — a near total elimination of its solid waste output.

Results of Efficiency and Waste Reduction: Steelmaking in an Upscale Neighborhood

Partly because of its success in the areas of pollution prevention and energy efficiency, the City of Chicago and A. Finkl & Sons Co. have created a new urban manufacturing campus in the heart of Chicago's exclusive Lincoln Park-Clybourn Corridor community.

The dedication of Finkl's new manufacturing campus culminates almost a decade of effort to preserve the nearly 10,000 manufacturing jobs provided by Finkl and its industrial neighbors. The specialty steelmaker is located only steps away from single-family homes that are valued at more than \$500,000.

The manufacturing campus falls within the City's recently dedicated Northbranch Industrial Corridor, a designated manufacturing area roughly bounded by the Kennedy Expressway, Clybourn Avenue, Diversey Street, and Chicago Avenue. The Industrial Corridor is believed to be the first in the Nation to blend heavy manufacturing and affluent residential interests. According to the City, 164 industrial firms are located within the Corridor.

Bruce C. Liimatainen, Finkl president, notes that the Northbranch Industrial Corridor represents the accomplishment of a goal that began with the creation of several planned manufacturing districts (PMDs) in the area. "Thanks to the innovative leadership of Mayor Daley and city departments, this designated area for manufacturing will encourage industrial companies to stay in the City," he explains. "With the meteoric growth of the surrounding community, it was clear that Chicago needed to take proactive steps to retain high-paying manufacturing jobs."

The PMDs' tiered zoning maps reserve the core of the area for manufacturing and create a buffer layer for commercial use, separating residential properties from the heavy manufacturing area.

According to Scott Sonoc, principal of Sonoc, Hutter, Lee Ltd., the architectural firm that created the master plan for Finkl's campus, the designation of the area as an "Industrial Corridor" assures its future prosperity. "It became apparent early on in the planning process that meshing the interests of the manufacturers and the adjoining neighborhoods would be required to assure the area's long-term survival," he said.

CASE STUDIES IN ENERGY EFFICIENCY AND POLLUTION PREVENTION EXCELLENCE

AAP St. Mary's

AAP SAINT MARY'S

THE SAVINGS ARE IN THE CHIPS

Introduction

AAP Saint Mary's is a producer of original and after-market aluminum wheels for the automotive industry. As an integrated casting and machine shop, AAP takes raw aluminum ingots and melts, casts, machines, and polishes finished aluminum wheels. While they were able to perform the whole process within one firm, AAP, like many other aluminum machining firms, still relied on an outside contractor to retrieve, clean, and re-form the chips from the machining process back into aluminum ingot.

The Problem

While many firms would look at the metal chips falling off rough castings in the machining process as a necessary waste product of fabrication, AAP identified a potential resource. Given that a typical wheel at the plant loses up to 40% of its weight in the machining process, the resulting waste chips add up to around one million pounds of aluminum *per month*. With 6,000 tons of aluminum shavings spinning off of AAP's milling machines per year, the opportunities for cost savings were immense

Previously, these chips, which are covered with cutting oil and other waste products, were transported by truck from the plant to a third-party recycling center. There, the chips were cleaned of the oil and other waste, re-melted, and reformed into aluminum ingots. The ingots were then transported back to AAP Saint Mary's, where they were melted once again and poured back into molds.

A Team Emerges With a Solution

AAP received an unsolicited information package from the Ohio Department of Development (ODOD) detailing the State's participation in the NICE³ program sponsored by the US Department of Energy. Realizing that they had a potential point of improvement in the efficiency of their production process, and that they could find a partner in ODOD, AAP Saint Mary's developed a plan to move the chip reclamation process in-house, eliminating the need to transport and re-melt their waste aluminum chips.

AAP submitted an abstract to NICE³ detailing their proposal for the trial of a new in-house centrifuge-based cleaning process that would allow them to integrate recycling into the plant's wheel production process. The new chip recycling process transports aluminum chips directly from the machine shop to the cleaning and re-melting operation for immediate recycling. The chips are separated from the cutting oils in a centrifuge, and then fed into an advanced furnace which improves the recovery of aluminum and produces fewer pollutants than the equivalent off-site melting process.

Energy and Environmental Savings

By reducing chip transportation and melting the aluminum once instead of twice, the new system reduces the energy consumption of the whole process by 15.6 billion BTUs. Additionally, aluminum waste has been reduced to 1.5% from the 8% waste rate found in the old process, and cuttings oils are now recycled as well.

Economic Impact

By reducing transportation and handling costs, cutting out the unnecessary independent recycling step, and maximizing the efficiency of its internal recycling system AAP Saint Mary's has realized significant economic savings. The cost savings amount to \$1.60 per wheel, and with a 100,000 wheel per month production rate, saves AAP Saint Mary's over \$1.9 million per year. The cost savings paid for the implementation costs of the project in a little over 18 months.

Project Financing

AAP Saint Mary's, with the help of the Ohio Department of Development, was able to secure \$300,000 in Federal financing to defray the cost and offset the risks involved in this \$1.3 million project. This grant was made available through the National Industrial Competitiveness through Energy, Environment and Economics (NICE³) program sponsored by the Department of Energy. The program attempts to reward projects that promote innovative solutions to problems of energy and waste conservation. The remainder of the costs associated with the project were financed internally, and recovered from savings in a little over 18 months.

Dan Hosek of AAP St. Mary's and Sue Covey and John Greenway of the Ohio Department of Development were especially helpful in aiding in the preparation of this article

CASE STUDIES IN ENERGY EFFICIENCY AND POLLUTION PREVENTION EXCELLENCE

DECATUR FOUNDRY, INC.

SMALL FOUNDRY MAKES BIG EFFICIENCY GAINS WITH PROCESS IMPROVEMENTS

Introduction

Decatur Foundry's 1993 sales of \$5.9 million may be small relative to the \$4.5 billion dollar National market for gray and ductile iron castings, but the innovative management of this small manufacturing firm in Southern Illinois has made Decatur a leader in high-quality, high-efficiency manufacturing. While a small facility, with a 1993 employment of 75 workers and output of 1,000 tons per month, Decatur's agility and regard for customer satisfaction, quality products, and efficient manufacturing make it an example for what can be accomplished.

As a small-run jobbing foundry, Decatur's production process places a high premium on a nimble production process. At the same time, the castings industry has been moving away from quickly drying solvent-based coatings to environmentally safer but slower drying water-based coatings. For many firms, this transition has created a bottleneck in the production process, as such coatings require extensive drying times.

The Problem

As this shift in drying procedures constrained Decatur's ability to establish quick turn-around time on production runs, market conditions demanded the opposite. The plants' customers, such as utilities and manufacturers of products containing Decatur's castings, were moving to just-in-time inventory systems, and were placing a premium on the ability of their suppliers to provide short-cycle responses to orders.

Decatur's unique need for a flexible, fast production cycle was further mandated by its small production runs. With an average run of only 10-25 parts on any particular mold, and with some orders for individual items, it was necessary that molds be formed and made ready for casting as quickly as possible.

The production of gray and higher strength ductile castings is a time-consuming process that requires precision and a tightly controlled environment if the end product is to be satisfactory. Initially, a mold is constructed using sand and a two-part epoxy binder. Once solidified, the mold is then coated to provide a smooth surface for the casting, and to prevent the molten iron from attaching to the porous sand.

While organic solvents have long been used for such coatings because of their high evaporation rate, environmental concerns now require Decatur to use drying water-based coatings. Even with electric ovens, it may take 20 minutes or more to dry the coatings. Worse, the tendency of the water to soak into the porous molds makes them prone to catastrophic failure. As the molten iron hits the sand, any remaining water will vaporize with sufficiently explosive force to shatter the mold.

Before approaching Illinois Power, and eventually working with the Electric Power Research Institute's (EPRI) Center for Materials Production, Decatur Foundry used two conventional electric-resistance ovens to dry molds. The slow drying time involved in the process was made worse by the ovens' inability to thoroughly dry the 20 mil coatings used, and to penetrate molds that often had deep crevices and pockets.

A Team Emerges With a Solution

Working with Illinois Power (now Illinova) and EPRI, Decatur identified a technology that solved their production problems. BGK Finishing Systems of Minneapolis, MN, which manufactures short-wavelength infrared drying systems used in the application of automotive paints, suggested the replacement of the ovens with an infra-red/forced air unit.

While the old electric-resistance ovens warmed the coatings indirectly by warming the air in contact with the mold's surface, the new short-wavelength infrared systems radiate heat directly to the surface of the mold. Instead of reflecting off of the coating, the infrared light directly heats the mold's surface, quickly driving moisture out of the sand. Further, the new system requires no warm-up time, so it need only be powered up when in use. It was outfitted with precision instrumentation, allowing a greater degree of control through the drying process. The net effect has been an increase in product quality with a decrease in drying time of 85%.

Energy and Environmental Savings

Decatur Foundry's approach to efficient mold drying has reduced the energy consumption of the first production line to be upgraded by 120,000 kwh annually, shaving \$9,000 dollars from Decatur's electric bill. The system has worked so well that the foundry replaced the dryer on the other original line soon after the prototype was installed, and has placed the infrared system on two subsequent lines as original equipment. In addition to the environmental benefits of water-based coatings, Decatur, through reduced electrical consumption, has also reduced CO₂ emissions associated with electrical production by 27 tons of carbon-equivalent per year.

Economic Impact

As often happens with energy-efficiency improvements, the benefits of the new system extend well beyond the reduced electrical bill. While the drying-bottle neck at one time forced extensive idle time for shifts of workers waiting for dry molds and created the need to pay inordinate amounts of overtime wages, the product flow from forming the mold to being able to pour and produce a finished product has been shortened. This reduced wage costs, and enabled Decatur Foundry to offer an extremely competitive turnaround time from the initial bid to the delivery of the finished product.

Improvements in the control of the drying time, coupled with advanced water-based coatings have provided mold surfaces that are sufficiently smooth to produce end products that require little or no additional polishing. The new units have freed up floor space, and provide enough flexibility to finish molds for castings weighing as little as a pound, or as heavy as almost 3 tons. Mold failure rates have fallen, and end-product quality is up.

Project Financing

A true success story, Decatur has added two new lines, increased employment to 85 workers, and has \$10 million in annual sales, an increase of over 40% from 1993. The cost of the initial system was \$12,000, which was paid back in electrical savings alone in less than 16 months. Financed internally through normal cash flow, the payback on this investment has been sufficient to make it a “no-brainer” according to factory management. Decatur’s experience demonstrates the payback that small initial investments in energy efficient technology can have in a short time frame. It is also proof of the advantages such low-cost investments can have on an entire plant.

Special thanks are due to the assistance of Mr. Terry Young of Decatur Foundry, Inc. for his extensive help in the preparation of this case study.

CASE STUDIES IN ENERGY EFFICIENCY AND POLLUTION PREVENTION EXCELLENCE

Quad/Graphics

QUAD/GRAPHICS, INC.

INNOVATION IN THE PRINTING INDUSTRY

Introduction

In 1971, President and Founder of Quad/Graphics, Inc., Harry Quadracci, bought an abandoned factory in Pewaukee, Wisconsin, using a \$35,000 second mortgage on his home and capital raised from a handful of associates. The beginnings were humble: 11 employees, a single press, and a 20,000- square-foot building. Today, Quad/Graphics ranks as the largest privately held printing company in North America. It has been growing more than 20% annually since it opened its doors.

As one of the country's top five printers, with 10 manufacturing sites, over 8,000 employees, and annual revenues of \$1 billion, Quad/Graphics specializes in high quality, four-color printing, and prints more than 1,000 titles, including *Time*, *Newsweek*, *Playboy*, *JAMA*, *Architectural Digest*, *Black Box Catalog*, as well as a variety of niche publications and catalogs. Quad/Graphics also has a division — Quad/ Tech — that designs, builds, markets, and services press and finishing controllers to the printing industry.

Quad/Graphics serves the catalog, magazine, free-standing insert, direct-mail and commercial products markets, and will soon serve the book industry. Quad/Graphics provides full production services, from design and photography through finishing, mailing, and distribution. The company offers full graphic design and typesetting; studio photography; professional desktop production; full photomechanical and digital image retouching, stripping, and final film preparation; archiving of digitized information; platemaking; gravure cylinder preparation; direct digital cylinder engraving; direct-to-plate imaging; mailing list management; and direct-mail manufacturing services.

Quad/Tech is the research and development division of Quad/Graphics. It provides engineering solutions to improve product quality, reduce waste, and add control and logic to press and finishing operations. Quad/Tech's High Tech Center, a facility specially built to house its design and manufacturing efforts, represents an investment in the development of

technology to improve signature and web handling, control color registration, provide management information and improve ink-jet addressing and demographic mailings. Quad/Tech's resources range from software programming and computer-aided design to manufacturing heavy machinery.

Energy Conservation

Energy may be the ultimate resource, and Quad/Graphics has worked aggressively over the long term to conserve it. The company used 13% less energy per unit of production in 1994 than in 1985, despite offering increasingly complex services.

In 1995, Quad/Graphics was awarded a \$400,000 grant from the Department of Energy's National Industrial Competitiveness through Energy, Environment, and Economics program (NICE³), whose goal is to improve industrial energy efficiency, reduce industry's production costs, and lower emissions to the environment. The Wisconsin Energy Bureau handled the application process and worked with Federal agencies to meet all application requirements. The grant was used by Quad/Tech to design, test, demonstrate, and commercialize a closed-loop ink-jet supply and printer solvent recovery system. This new technology has significant environmental, economic, and energy benefits for Quad/Graphics and other businesses in the publication, product labeling, direct mailing, and packaging industries. The ink-jet supply and printer solvent recovery system will reduce the amount of ink and solvent used in the ink-jet printing process by at least 50%, will reduce materials costs by \$552,000 annually, and will reduce energy costs by \$72,900 annually.

Quad/Tech has devised a closed-loop ink-jet system that captures 80 to 90% of methyl ethyl ketone (MEK) vapor and condenses it for reuse instead of letting it escape into the air. Once the closed-loop system is installed on all the ink jet lines at Quad/Graphics, use will be reduced by nearly 7,000 gallons annually, resulting in savings of \$420,000. The company also expects to save a minimum of 2.31 trillion BTUs by the year 2010 by eliminating ventilation systems and the production and transportation of MEK. The closed-loop system will soon be commercially available. Because the system is very economical and has its emission-reducing apparatus built into the unit, small print shops (which typically receive less regulatory scrutiny) will have both the incentive and the means to reduce emissions.

Conserving Energy in Other Ways:

- In 1994 Quad/Graphics signed on as one of the initial participants in the Federal Climate-Wise initiative, a program jointly sponsored by the Environmental Protection Agency and the Department of Energy. The company pledged to work toward continuing a 3% annual rate of reduction in energy usage. Maintaining that rate will require increasing innovation as we approach the limits of current technology. On December 12, 1994, the company was honored for its leadership in the Climate-Wise initiative at the first White House Conference on Environmental Technology in Washington, D.C.
- With many other energy conservation projects coming into fruition in 1994, Quad/Graphics earned more than \$472,000 in utility company energy rebates from process improvements.
- The company uses the latest, most energy-efficient technology in equipment expansions and in retrofits.
- It also designs energy-efficiency into new building construction — in insulation, lighting, and mechanical systems.
- Quad/Graphics recovers waste heat by making use of the hot water created in water-cooled mechanical systems.
- The company continually evaluates new technologies and techniques for opportunities to make manufacturing processes and infrastructure more efficient. Currently under scrutiny are ways to reduce temperatures in our ink-drying ovens, converting part or all of their fleets of vehicles to alternative fuels, and using more energy-efficient computer terminals.
- As a participant in the Federal Green Lights program, Quad/Graphics followed an accelerated schedule for retrofitting lighting fixtures with more efficient technology. The company's initial round of Green Lights improvements annually conserves 1.5 million kilowatt-hours, preventing emission of 2.25 million pounds of carbon dioxide 8.7 million grams of sulfur dioxide, and 3.75 million grams of nitrogen oxides.

Reduce, Reuse, Recycle — Using Resources as Wisely as Possible

Quad/Graphics' environmental stewardship centers around making the best possible use of all resources. The company's first step is to use resources as conservatively as possible. Then the company reuses or recycles all that it can. Finally, it evaluates materials that leave the plants for disposal, looking for ways to prevent waste in the future.

A key factor that makes this strategy viable for the long term is that it makes perfect business sense. When business and environmental interests coincide, efforts are doubly productive.

Paper

Conserve: The company's consistent waste percentage reduction — from 10.11% in 1988 to just 7.58% in 1994 — results in millions of pounds of paper saved each year.

Recycle: Production, office paper and cardboard recovered for recycling in 1994: 133,000 tons.

Dollars and sense: Recycling paper waste makes perfect sense. The costs of collecting, shredding, and baling wastepaper are offset by the money it brings in as a raw material, and by the \$6.7 million in landfill fees avoided.

Ink

Conserve: In the late 1980s, Quad/Graphics began providing employees with information about ink waste. The company asked for their ideas on reducing it, and implemented the best plans. Decline in ink waste from 1989 to 1994 reached 40%, to 460 drums from 762. (Note that these figures are absolute, not relative to production, which increased 111% during the same period.)

Dollars and sense: Approximate cost of offset printing ink: \$1,000 per drum. Disposal cost of offset printing ink: \$150 per drum.

Plastic

Recycle: Quad/Graphics works aggressively with vendors and others to find willing recipients of, or better yet, markets for used plastic. Much of its plastic is sent back to the vendors for reuse. The careful sorting of colored plastic creates a closed-loop system. For instance, the green strap is recycled back into green strap. Much of the stretch wrap that the company recycles is made into garbage bags. Plastic recycled in 1994: 287 tons. Plastic end cores from polywrap rolls, sent back to the manufacturer for reuse in 1994: 35,000.

Dollars and sense: Plastic recycling revenue: \$33,114. Landfilling fees avoided: \$14,350.

Wood

Master Carpenter Ben Erdman established a highly efficient Pallet Repair Department to fix broken pallets. The company also chips and shreds waste wood for mulch. In 1994, it developed a new facility and made upgrades to equipment to increase capacity for chipping and shredding.

Conserve: Number of pallets repaired for reuse in 1994: 96,000.

Recycle: Wood plugs from paper-roll stocks: 224 tons.

Metals

Recycle: Quad/Graphics recycles strapping, aluminum and miscellaneous metals from all facilities. Metals recycled in 1994: 370 tons.

Dollars and sense: Hauling, tipping and landfill fees avoided: \$18,500.

Quad/Graphics was honored in 1994 with the Wisconsin Business Friend of the Environment Award for Environmental Stewardship. In 1993, The State of Wisconsin recognized Quad/Graphics' environmental commitment by bestowing the company with its second Governor's Waste Reduction & Recycling Award.

Pollution Prevention

Quad/Graphics invests in the best practical pollution control technology to minimize emissions from drying ink, and maintains its equipment to ensure maximum performance. The catalytic converters on offset presses are more than 99% efficient, and the solvent recovery system in the gravure pressroom is more than 97% efficient.

The company literally keeps a lid on press cleaning solvents and other evaporative chemicals by closely monitoring how employees use, reuse, handle, and store them.

For instance, the Hartford plant has started wringing blanket wash from press-cleaning rags and reusing it. Other plants use a centrifuge to be sure that solvent is separated from cloths before sending them out to the cleaners. In 1994, waste figures were less than half the amount from four years earlier, despite the company's increasingly complex services and steady production increases.

CASE STUDIES IN ENERGY EFFICIENCY AND POLLUTION PREVENTION EXCELLENCE

PONDERAY NEWSPRINT COMPANY

BYPASS SULPHONATED LONG FIBER DIGESTER PROJECT

Introduction

Ponderay Newsprint Company located in Usk, Washington, manufactures the paper required for the newspaper industry. Ponderay employs 200 individuals. The newspaper manufacturer is an excellent example of a company that uses energy efficiency to increase profitability and productivity. Ponderay Newsprint continues to achieve energy savings and increase productivity in their High Yield Pulp Mill, using energy efficiency techniques.

Project Description

The underlying concept behind Ponderay's project is to simplify the existing paper refining process and to make it more efficient. Operational experience has shown Ponderay that they have the ability to produce an acceptable strength material without using the standard pressurized chemical treatment process. The standard process required equipment that used a large amount of energy in an inefficient system. The standard equipment used energy continuously, irrespective of the treatment process. In addition, the existing system in the High Yield Pulp Mill was a single line system that caused total line curtailment when out of service. Ponderay's process energy efficient improvements relieved operational difficulties, reduced maintenance requirements, and improved system capacity. Ponderay replaced the chemical treatment equipment with a much simpler system for fiber refining.

The company installed a Bypass Sulphonated Long Fiber Digester.¹ The new system consists of an atmospheric variable speed metering conveyor, a vertical drop chute, and a fixed speed, low compression, plug screw feeder for each refiner. Ponderay Newsprint created two independent lines to increase operational flexibility and reliability. The total cost of the project was \$389,265.

Project Economics

Ponderay's energy efficiency project results in savings in several operational areas and results in an increase in productivity. The savings from the Bypass Sulphonated Long Fiber Digester

¹The Bypass Sulphonated Long Fiber Digester involves the technology used to collect long fibers and bundles created as waste in the former process. The new system reprocesses these fibers into acceptable pulp. The long fibers are collected in storage tanks, dewatered to a consistency of about 27%, possibly chemically treated, heated under pressure, and refined.

project result in a 4.61 year payback period. The company has a debt to equity ratio criteria of approximately 40% nominal, and an internal rate of return hurdle rate of 20%-30%. The estimated rate of return for this project is 18.72%. Though this would appear to be slightly lower than Ponderay's hurdle rate, for special projects, with clear corporate advantages, the company pursues projects accordingly.

Energy and Environmental Savings

Ponderay's annual measured energy savings from the energy efficient digester in their High Yield Pulp Mill is 182.26 kW or 1,596,614 kWh.

Project Financing

Ponderay Newsprint financed the majority of their energy efficiency project internally. They received additional financing assistance from Pend Oreille County's conservation program. The program pays \$.15 per kWh/year which translates to \$239,492 per year in savings. These savings improve the payback period from 8.03 years to 4.61 years. Ponderay's financing program is effectively a capital lease, but Ponderay's energy manager readily suggests that in the future they will consider doing projects of this type, using energy savings performance contracts.

The Team That Was Required To Succeed

The team that worked together to see this project to completion consisted of utility partners, county government, and technical consultants, as well as Ponderay's in-house expertise, including Ponderay's energy manager, Don Guenther and the company's financial operations.

Special Considerations

Don Guenther explains that although Ponderay chose to finance the digester project internally, next time he would consider financing a similar project with performance contracting.

Ponderay clearly benefits from its energy manager's close working relationship with the company's production processes. Don Guenther's network with the Industrial Customers of Northwest Utilities helps energy managers share ideas on energy efficiency and pollution prevention, and other cost effective projects that make sense for manufacturers.

Ponderay's energy manager explains that for profitable energy efficiency and pollution prevention projects, the company "just finds a way to get it done." The company doesn't base everything on hurdle rate and IRR. They also want to do the right thing, "knowing that energy efficiency and pollution prevention moves often lead to increased profitability and productivity of manufacturing operations."

CASE STUDIES IN ENERGY EFFICIENCY AND POLLUTION PREVENTION EXCELLENCE

NISSHINBO, CALIFORNIA, INC. - ENERGY CAPITAL PARTNERS

VARIABLE SPEED DRIVES INSTALLATION

Nisshinbo, California, Inc.
& Energy Capital Partners

Introduction

Nisshinbo, California, Inc. is a textile manufacturer located in Fresno, California. The manufacturer is a U.S. Department of Energy Motor Challenge Partner that produces yarns and threads, from the initial spinning process to finishing. Nisshinbo has been in business since 1989. The company joined forces with Energy Capital Partners of Boston, Massachusetts, to finance their energy efficient motor replacement project. Energy Capital Partners, a project financier, provides financing that enables companies like Nisshinbo, CA, Inc. to implement energy efficiency and pollution prevention projects. Nisshinbo is an innovative young company that incorporates energy efficiency techniques into their business approach, maximizing profits and creating positive environmental results.

Project Description

Nisshinbo installed variable speed drives throughout their manufacturing facility. The new drives are a part of the textile spinning and weaving processes. Nisshinbo realized that energy efficient motors would out-perform their former system, saving the company in operating costs. The total cost of the variable speed drive project at the Nisshinbo facility was \$178,000.

Project Economics

Nisshinbo's new drives reduce energy expenses and create profits through increased productivity. The savings from the variable speed drives create a 1.3 year payback period. The rate of return for this project is approximately 70%.

Energy and Environmental Savings

Nisshinbo's variable speed drives conserve energy in the textile manufacturing process, creating improved efficiency and allowing for energy consumption that more adequately tracks energy requirements. The standard drives required a constant supply of electricity irrespective of system requirements. The new system adjusts for load requirements, using less energy, more efficiently. The new system also increases production at the facility. The variable

speed drives improve the performance of the spinning and weaving processes and result in higher product quality. Nisshinbo's annual measured energy savings is 1,314,342 kWh. This translates to approximately \$140,000 in savings for the company each year.

Project Financing

Nisshinbo collaborated with Energy Capital Partners to develop a financing program that works. Energy Capital Partners financed the manufacturer's project savings "off balance sheet," reflecting the upgrades as a cost of doing business rather than an asset. They created a 9 year loan. Energy Capital Partners' financing program is called Project Finance, offering the energy service company a financial annuity and Nisshinbo a performance-based solution. Nisshinbo received additional funds from the Pacific Gas and Electric Power Saving Partners Program. Their energy service provider recognized the efficiency project's eligibility for this program and initiated the process. Nisshinbo explains that innovative financing was essential in implementing their project.

The Team That Was Required to Succeed

The variable speed drive project is an excellent example of how a manufacturer and a financier of energy projects can join forces to generate profits through E2 and P2. Nisshinbo worked with Energy Capital Partners to finance their innovative project. An energy service company, ADI Control Technologies, installed the variable speed drives in the facility and is responsible for the performance and maintenance of the equipment.

Special Considerations

Drives are a fundamental part of many manufacturing operations and buildings in general. Competitive companies recognize that minimizing unnecessary use of energy has a positive impact on profitability and productivity. Innovative financing helps companies take advantage of energy efficiency and pollution prevention technology opportunities with little or no out-of-pocket expenses. Nisshinbo is very aware of the competitive nature of the markets the company supplies. Whenever possible such companies are going to capitalize on the competitive advantages available to them with E2 and P2 projects or any other profitable projects.

CASE STUDIES IN ENERGY EFFICIENCY AND POLLUTION PREVENTION EXCELLENCE

WACKER SILTRONIC

MULTI-WIRE SAW FOR SILICON SLICING

Introduction

Wacker Siltronic Corporation located in Portland, Oregon manufactures silicon wafers used in the semiconductor industry. The company employs 1700 individuals and involves each employee in the achievement of environmental performance and pollution prevention goals. Wacker Siltronic is an excellent example of a corporation that utilizes energy efficiency and pollution prevention technologies to increase their profitability and productivity.

Project Description

Wacker Siltronic's process improvements decrease waste production and reduce the large amount of consumables required by wire saw operations. In an effort to minimize waste, and improve efficiency, profitability, and productivity, Wacker Siltronic identified the following tasks:

- Develop alternative cutting fluids, which reduces consumables, and is recyclable.
- Develop a reclaiming technology to recover silicon carbide abrasive.

To meet these goals Wacker Siltronic installed a new multi-wire saw silicon slicing technology, and reclaimed the cutting slurry from the company's wire saw operations. The estimated cost of the entire project is \$2 million. Wacker Siltronic's energy efficiency project increases productivity and reduces costs as a result of water savings and reduced sewer charges.

Project Economics

Wacker Siltronic's slicing and reclaiming technology increases productivity and creates savings in several operational areas of the company. The installation of the new multi-wire saw increases silicon wafer production by 20%. They continue to save \$400,000 per year in water expenses and sewer charges. Alternative cutting fluids and recycling technology result in a 75% savings in disposal costs. This translates into a savings of \$640,000 each year for the company. Wacker Siltronic's reduction of consumables generates \$1.5 million in savings per year. The savings from the new system result in a 1.4 year payback period. Wacker Siltronic has an internal rate of return hurdle rate of 10% for new projects. The rate of return for this project is 26.3%.

Energy And Environmental Savings

Wacker Siltronic's project decreases the use of alternative cutting fluid, the use of water, and the production of air emissions. Wacker Siltronic developed an alternative cutting fluid that is recyclable, thus decreasing waste production and reducing the need for the fluid itself. The project reduces the volume of hazardous air emissions, created when changing cutting fluids, by 36 tons per year. The improvements create a savings of 37 million gallons of water each year.

Project Financing

Wacker Siltronic is a privately held company. The company provides for all of its financing internally from shareholders and operating budgets. Wacker Siltronic considers energy savings and pollution prevention projects under the same terms as other capital projects. All capital projects must have a payback period of five years, and the company prioritizes projects and expenditures with a payback period of three years or less.

The Team That Was Required To Succeed

The team that worked to see this project to completion consisted of process technology engineers, environmental engineers, equipment suppliers, waste treatment providers, and Wacker Siltronic's internal corporate and financial decision-makers.

Special Considerations

Wacker Siltronic Corporation is an ISO 9001 certified supplier of hyper pure silicon wafers. The Corporation operates under a Quality Management System and strives to be the vendor of choice to their customers by exceeding expectations in terms of quality and total value, and achieving six sigma quality products and services. Wacker Siltronic strives toward continuous improvements of their products and services, and energy efficiency and pollution prevention projects offer opportunities for improvements in all areas of the manufacturer's operations.

Corporate quality goals serve equally as well for environmental performance and pollution prevention. Continuous improvement in all environmental areas has resulted in numerous awards for Wacker Siltronic including: the first Oregon Governor's Award for Toxic Use Reduction, Excellence Award for Waste Water Treatment Performance, the first EPA Evergreen Award for Environmental Leadership and the Best Success Award for Energy Savings, Waste Reduction, Water Conservation, and Transportation Alternatives.

CASE STUDIES IN ENERGY EFFICIENCY AND POLLUTION PREVENTION EXCELLENCE

TOP VENEER & TRADING CO., LTD. - HELLER FIRST CAPITAL

SHADE AND MIST SPRAY SYSTEM

Top Veneer & Trading Co.
& Heller First Capital

Introduction

Top Veneer & Trading Company, Ltd. is a new veneer manufacturing plant, located in Merlin, Oregon. They will employ 50 individuals and specialize in the production of sliced and dried hardwood face veneers. Top Veneer will produce their “fancy face” veneers from a sustainable Western United States hardwood species. They are an excellent example of how a manufacturer can work with a financial provider to generate profits by incorporating energy efficiency and pollution prevention techniques into their manufacturing process, even during business start-up.

Project Description

In its new facility, Top Veneer will be installing a new Shade and Mist Spray System. The new system will utilize water containment and recirculation, combined with steam condensate collection from flitch heating chambers. Top Veneer will install the new energy and water efficient steam chambers in place of standard hot water vats. The efficiency project also addresses accident potential and disposal requirements. The total cost of the project is \$35,000.

Project Economics

Top Veneer’s energy efficiency project will result in savings in several operational areas and will result in an increase in productivity. The savings from the Shade and Mist Spray System will result in a 7 year payback period. The Shade and Mist Spray System will decrease water usage, resulting in reduced water costs. Smaller volumes of water produced at the end of each flitch cooking schedule will save Top Veneer sizable water disposal costs. Productivity for flitch cooking will increase because there is no need to heat large volumes of water for each cycle. The implementation of steam chambers will eliminate the time and energy consuming process of continually heating and maintaining the temperature of 500-600 gallons of water required to fill the vats.

Energy and Environmental Savings

Top Veneer's Shade and Mist Spray System will reduce water usage, and recycle (re-use) evaporated non-contaminated water rather than releasing the water into the sewer system. Veneer manufacturers have historically used hot water vats to process materials. The hot water vats create large quantities of water for disposal at the end of each flitch cooking schedule. The new process will reduce disposal requirements. Eliminating the presence of large, open hot water vats on the premises, will reduce the potential for occupational accidents, improving conditions and reducing liabilities.

Project Financing

Top Veneer and Trading Co. financed the project with the help of Heller First Capital. Heller First Capital's financing package involves a conventional loan, with a 75% SBA loan guarantee. The loan has a 7 year term. The financing is part of an SBA guaranteed loan package that Heller First Capital offers to finance business improvements. The loan financing package provides for inventory, working capital, equipment, and tenant improvements.

The Team That Was Required to Succeed

The team leader, working to see this project to completion, is Dave Fairbairn, from Top Veneer & Trading Co., Ltd. Dave Fairbairn is Top Veneer's general manager, and is responsible for the conception and outline of the project. Rance Plumb, of Plumb industries, is the project supervisor, and is responsible for the installation of the Shade and Mist Spray System. Tom Gillman, of Pacific Northwest Steel Construction, is the engineer/fabricator, and is responsible for the design of the project. Robin Hudson, of Rendatta Industrial Parks, is the park's business manager, and is responsible for the waste disposal in the park. Heller First Capital joined forces with the team to make the project financing work.

Special Considerations

Top Veneer and Trading Co., Ltd. will be producing thin sliced (1/100" thick) fancy face veneers from a sustainable, Western United States hardwood species. The veneers will be marketed primarily in Asian markets. The company knows they can make profitable improvements using energy efficiency and pollution prevention technologies. The Top Veneer project illustrates that E2 and P2 approaches are projects that the financial community has faith in, because they know their customers will be improving profitability and productivity and reducing liabilities.

CASE STUDIES IN ENERGY EFFICIENCY AND POLLUTION PREVENTION EXCELLENCE

TRAILBLAZER FOODS, INC. - THE MONEY STORE & KEY BANK

WATER RECYCLING AND TREATMENT SYSTEM

Trailblazer Foods, Inc.,
The Money Store & Key Bank

Introduction

Trailblazer Foods, Inc. is a food manufacturing company, located in Portland, Oregon. They specialize in the production of fruits, jams, and syrups, and currently employ 45 individuals. Trailblazer Foods exemplifies how a manufacturer can work with a team of financial providers to generate profits by incorporating energy efficiency, pollution prevention, and recycling into their manufacturing techniques.

Project Description

As a result of expanding business Trailblazer Foods needed a new building to meet demand. The company realized that the new building represented a terrific opportunity to take advantage of profitable energy efficiency and pollution prevention projects. Working as a team, Trailblazer designed and installed one of the most innovative water recycling systems for heating and cooling in the food processing industry. The system cuts the company's water use and electricity use in half. The system also reduces gas use by 10%. The water recycling and treatment system also helps Trailblazer comply with State environmental requirements for process effluents. The project is truly unique because the company's employees proposed, designed, and implemented the innovative recycling and energy saving system. Employees at Trailblazer Foods saw the benefits of E2 and P2 and made the innovative project work. The water treatment system uses recirculated water for pasteurizing and cooling food products. The system recycles water continually for the consistent processing of syrups, fruits, and jams. The system increases and decreases temperatures reliably, using the heat capacity and thermal integrity of water to control the process. The Trailblazer system accomplishes the cooling efficiently, reducing the unnecessary electricity and gas costs required by fans for cooling and by boilers for pasteurization. After using the water multiple times for pasteurization and the cooling process, Trailblazer treats system water and discharges effluent that meets environmental standards. Trailblazer's separator eliminates sludge prior to discharge, preventing the release of hazardous sludge material. The cost of the Water Treatment project was \$40,000.

Project Economics

Trailblazer's energy efficiency project results in savings in several areas. The new system reduces water and electricity use by half, cutting associated operating expenses by 50%. The reduction in gas use is 10%. The savings from the water treatment project result in a 2 year payback period. The company has a debt to equity ratio criteria of 2 to 1 nominal, and an internal rate of return hurdle rate of 20%. The rate of return for this project is 30% . While economic payback is a crucial factor in considering new projects, Trailblazer Foods also considered this project in terms of its environmental, and energy efficiency advantages.

Energy and Environmental Savings

Trailblazer Foods, Inc. is required by the state of Oregon to meet State environmental regulations and specifications. They know they can create profits by doing the right thing environmentally. Trailblazer Foods takes advantage of this challenge, creating profits, increasing energy savings, and decreasing pollution. From an energy standpoint for pasteurization, recirculating water cuts boiler energy use in half, reducing gas requirements and the associated costs. This translates to 10% gas savings. This system also cuts electricity required by fans for the cooling process in half. The system cuts water use by 50%, saving 1,500,000 gallons of water per year. In addition to the resource savings, the water system eliminates the release of hazardous sludge into the water system. Trailblazer accomplished this by installing a separator to filter sludge out of the water sent into the water system.

Project Financing

Key Bank's Paul Warr-King and Northwest Small Business Finance Corporation's (NSBFC) Teresa Cowles, now of The Money Store, joined forces to finance Trailblazer Foods' new building and their innovative water and energy saving project. The companies worked together to finance the project with competitive rates, using a conventional loan with an SBA guaranteed loan under the SBA's 504 loan program. Trailblazer's president Gary Walls, explains that "a half percentage point one way or the other didn't make as much of a difference as our financial partners' understanding of the needs and goals of Trailblazer Foods." Trailblazer Foods chose financial partners that are sensitive to the specialized needs of the company and willing to work with Trailblazer to create an appropriate financing package. Key Bank and NSBFC helped see the project through to completion. Key Bank and NSBFC created a 10 year loan with an 8.6% interest rate in the amount of \$750,000. NSBFC provided a 20 year loan in the amount of \$750,000, subordinated to Key Bank using an SBA 504 loan guarantee. NSBFC's 504 loan program provides financing for owner occupied commercial real estate and equipment.

The Team That Was Required to Succeed

Trailblazer Foods hired a contractor for the overall design and construction of the new building. Trailblazer designed the new water recycling and treatment facility in the building, and the design and construction contractor helped ensure that the building design properly incorporated the requirements for the innovative new water and energy savings system. Teresa Cowles and Paul Warr-King, and their respective financial institutions, worked with Trailblazer Foods to ensure financing was in place for the project.

Special Considerations

Trailblazer illustrates that good companies listen to their employees, because good ideas often surface from within. They demonstrate that energy efficiency and pollution prevention investments are compatible with new building design and often result in increased profitability and productivity.

CASE STUDIES IN ENERGY EFFICIENCY AND POLLUTION PREVENTION EXCELLENCE

NAUMES, INC. - PACIFICORP

AMMONIA REFRIGERATION UPGRADE

Introduction

Naumes, Inc. is the largest family-owned pear grower in the United States, with facilities in Medford, Oregon; Wapato, Washington; and Marysville, California. They specialize in fruit growing, storage, processing, and juice production. The company joined forces with PacifiCorp of Portland, Oregon for up front auditing and analysis of their energy efficiency and pollution prevention project at their Medford facilities. Naumes, Inc. exemplifies how a manufacturer can generate profits through the implementation of energy efficiency technologies.

Project Description

Naumes, Inc. implemented new and retrofit projects for ammonia refrigeration upgrades. The company upgraded two ammonia refrigeration systems to increase energy efficiency. The first project was a retrofit of an ammonia refrigeration system serving three buildings. The new system uses computer controls and variable speed drives. The second project involves new construction with an additional three buildings. The new construction employs computer controls, variable speed drives, and optimized equipment selection. The project cost for the retrofit was \$125,000. The project cost for the new construction was \$185,903.

Project Economics

Savage Engineering performed the verification of the results for Naumes' new and retrofit projects. The actual operation savings from the new construction refrigeration, controls, and variable speed drives installation result in a 4.4 year payback period. The retrofit project's payback period is 2.1 years. The manager explains that on average the company typically likes to see projects with 7 year (or less) payback periods.

Energy and Environmental Savings

Naumes, Inc.'s energy efficiency project results in energy savings and even higher product quality, though product quality may be hard to quantify. The energy efficiency project also improves monitoring and awareness with regard to energy and environmental management. Originally the new construction project was expected to save 475,386 kWh per year;

however, in the first three years the project has outperformed estimates, saving an estimated 550,000 kWh/year. The retrofit project creates a savings of approximately 741,000 kWh/year. Naumes' cost savings amount to \$28,000/year for the new construction, and \$37,000/year for the retrofit project with an electricity rate of \$0.05/kWh for both projects. The new project creates a 46% refrigeration savings, and the retrofit project saves 53% on refrigeration costs.

Project Financing

Pacificorp's FinAnswer program provided Naumes, Inc. with free, up-front auditing and analysis for their upgrades. The company evaluated economic and environmental implications of the new and retrofit projects and then financed the improvements internally, counting on additional financial return from the State of Oregon's performance based tax credits. The tax credits amount to a total of 35% of the implementation costs of the E2 and P2 project accrued from the project over its first five years. Naumes was awarded \$65,000 in tax credits for the new construction project, and \$42,000 for the retrofit.

The Team That Was Required to Succeed

The participants in this project were:

- Cascade Energy Engineering for analysis
- PacifiCorp for the project direction and information
- State of Oregon for tax credits
- Techni-Systems for controls contracting
- Valley Electric for electrical contracting
- Savage Engineering for verification
- Allen Bradley for the variable speed drives

Special Considerations

Naumes, Inc., understands the competitive nature of its business better than anyone. They understand that any competitive advantage represents potential market share and profitability. energy efficiency and pollution prevention projects are helping Naumes remain competitive in a price and quality conscious market place. The company understands that quality and commitment are synonymous with the profitability and productivity results of E2 and P2 projects.

CASE STUDIES IN ENERGY EFFICIENCY AND POLLUTION PREVENTION EXCELLENCE

U.S. BANCORP LEASING AND FINANCIAL

RECYCLING PROCESS ENHANCEMENTS

U.S. Bancorp
Leasing and Financial

Introduction

U.S. Bancorp Leasing and Financial located in Beaverton, Oregon provides equipment leasing and financing services for businesses of all types. The corporate examples below are examples of the kind of projects in which U.S. Bancorp serves its customers. Each refuse collection and recycling company is one of the largest in the industry in the Portland area. Each company generates revenues in the range of \$15,000,000 - \$30,000,000. Both companies prefer to remain anonymous. Each company is an excellent example of a company that uses energy efficiency to increase profitability. Both recycling and refuse collection companies have achieved energy savings through enhancements to their recycling process.

Project Description

Each recycling company has increased productivity through the use of measures that improve the energy efficiency of the recycling process. Both companies developed projects that involve energy efficient conveyor systems, balers, transportation equipment, and loading equipment to increase efficiency throughout their operations.

Project Economics

The energy efficiency projects result in savings in several operational areas of each company. The savings from recycling enhancements result in a 3.5 year payback period for the first company, and a 3 year payback period for the second company.

The Oregon Office of Energy (OOE) offers a program that allows a company to claim tax credits on qualifying energy efficiency projects. The program is called the Business Energy Tax Credit program (BETC). The program allows the User or the Lessor to claim a 35% tax credit on the total energy project implementation cost, claiming 10% in the first two years, and 5% for each of the 3 years thereafter. The process begins when the company files an application with OOE for consideration under the BETC program. OOE evaluates the project

and determines the project's eligibility. If eligible, OOE issues a Preliminary Certificate of Qualification. The applicant pursues the project and OOE awards a Final Certification. In the recycling industry examples, the companies applied for and received the OOE tax credit after demonstrating the savings each would create with its energy efficiency improvements.

Energy and Environmental Savings

Each company determined the total cost for the implementation of their energy efficiency and pollution prevention project, and included this information in the application for the BETC program. The first company now handles 95,800,000 lbs. of material annually. The recycling company's E2 and P2 project enables the company to recycle 43,110,000 lbs. of this material each year. They included both of these figures in their BETC application. Each company's project reduces their electricity use, gasoline use and labor costs. As a Lender or Lessor, U.S. Bancorp Leasing and Financial considered all of this information in their credit decision and in terms of the agreements that would link to the BETC program.

Project Financing

Project planners frequently approach U.S. Bancorp with proposed projects involving a variety of tax and financing assumptions. In the two current examples U.S. Bancorp created an equipment lease totaling \$750,000 for the first company, and an equipment lease totaling \$185,000 for the second. The first recycler uses the depreciation to reduce their tax liability. The approximate terms of the transaction are 60 months with monthly payments of \$11,704. There will be a 20% residual at the end of the lease. The cost to finance, on a yield to maturity basis, is approximately 4.3%. The second company's equipment lease also has a 60 month term with 60 monthly payments of \$2,567 to a Fair Market Value Residual. Based on U.S. Bancorp's experience with the equipment, they estimate that their cost to finance, on a yield to maturity basis, is about 3.0%.

The Team That Was Required To Succeed

A U.S. Bancorp team for an equipment lease typically consists of the lessor's CFO, the project planner (frequently an engineer), the lessor's CPA or tax advisor, the technical contractors, and the state partners participating in the energy efficiency and pollution prevention project.

Special Considerations

Leases work best for some companies, while loans work best for others. In each of the two U.S. Bancorp examples, the financial partners worked with the company to provide an E2 and P2 financial package that is most responsive to the client's business needs.

CASE STUDIES IN ENERGY EFFICIENCY AND POLLUTION PREVENTION EXCELLENCE

B & G MACHINE, INC. - CASCADIA REVOLVING FUND

JET WASHER/EVAPORATOR SYSTEM

**B & G Machine, Inc.
& Cascadia Revolving Fund**

Introduction

B&G Machine, Inc. is a machine tool fabricator located in Seattle, Washington. The company “re-machines” large trucks, and employs 31 individuals. The manufacturer recycles automotive parts, machining and refining them for use in new and used heavy duty vehicles. B&G’s customers are those who seek a cost-effective alternative to parts replacement. B&G joined forces with Cascadia Revolving Fund to finance their innovative cleaning and evaporating system, involving energy efficiency and pollution prevention. Cascadia Revolving Fund provides financing, enabling companies like B&G to carry out similar projects. B&G exemplifies how a manufacturer can work with a financial provider to generate profits and increase efficiency through pollution prevention technologies.

Project Description

B&G’s project eliminates most of the company’s caustic automotive parts cleaning. They accomplish this by using a jet washer/evaporator system. The new system creates benefits for the environment and improves B&G’s occupational environment. The B&G system works on the principal of total pollutant segregation. It reduces water requirements in the automotive parts cleaning process.

Toxic Use Reduction (TUR) is a major result of the new jet washer/evaporator system. TUR is a cost-effective pollution prevention strategy. A small amount of caustic is still used to clean oversized parts. The reduction of caustic use, combined with the tandem use of the jet washer, caustic tank, and evaporator improves the energy efficiency of B&G’s operations. The total cost of B&G’s jet washing and evaporator system was \$31,000.

Project Economics

B&G’s pollution prevention project results in savings in several operational areas of B&G’s production process and results in increased productivity. The jet washer/evaporator system generates \$36,000 in savings each year.

The new technology increases throughput which in turn increases profitability. The new process reduces cleaning time from several hours to less than half an hour. Reductions in water usage and the elimination of expenses for sewer discharge permits significantly reduce costs. Hazardous discharge permit fees, based on volume, are eliminated entirely.

Energy and Environmental Savings

The jet washer/evaporator system reduces water consumption in the cleaning process from 180-220 gallons per day to 73-101 gallons per day. This represents a 27% decrease in annual water consumption. The new system allows for the separation of hazardous effluents and eliminates the disposal of hazardous waste into the sewer system. The significant reduction in cleaning time also reduces energy use.

Project Financing

B&G financed their jet washing and evaporator system using Cascadia Revolving Fund's financing program. Cascadia's program is called the Pollution Prevention Lending Program, providing financing to small businesses to reduce their output of pollution. B&G evaluated economic and environmental implications of the jet washer/evaporator system within their company first, and then provided Cascadia Revolving Fund with the specifics on the project. Cascadia created an 8 year loan for B&G at the rate of 11.5%. B&G's loan principal with Cascadia is \$37,000 with a \$600/month payment.

The Team That Was Required To Succeed

The team that worked together to see this project to completion consisted of B&G (the manufacturer), Cascadia Revolving Fund (the financier), and the contractors required to install the new system.

Special Considerations

B&G's environmental management project generates positive results in numerous areas of the company. These results include financial, environmental, and energy benefits. The new system reduces employee exposure to caustics, increasing employee comfort and productivity. The design and installation of the technology has facilitated a "learning process" that has encouraged B&G to make other environmental changes. Improved labeling and a stricter segregation of chemicals are a few of the positive ramifications of B&G's energy efficiency and pollution prevention endeavor.

Federal Financing Assistance Programs: What's Available to Manufacturers?

Without outside guidance and support, few small manufacturers are able to secure all the financing resources they need to modernize, adopt the right efficiency improvements, and improve productivity. This *toolbook* seeks to serve as a handbook of basic information and contacts for manufacturers that want to stay competitive, but often don't know where to look for help.

The Federal Government offers a wide variety of programs -- loan guarantees, grants, and technology transfer support, and technical assistance -- to help reverse shortcomings in the capital markets. As the program explanations will show, some of these tools are administered directly by Federal agencies, while others are coordinated by private organizations, local development agencies, and non-profit development groups.

This section reviews financial and technical assistance initiatives overseen by Federal agencies with particular interest in manufacturing. Through its *Office of Industrial Technologies (OIT)*, the *Department of Energy* acts as a partner to industry in its efforts to operate more efficiently. A key component of OIT is to provide research and development, and direct financial assistance, as an investment in the long-term growth and competitiveness of U.S. manufacturing. Key programs include:

- National Industrial Competitiveness through Energy, Environment, and Economics, known as NICE³;
- Industrial Assessment Centers;
- Motor Challenge
- resources available through various DOE labs
- Climate Wise
- technical assistance for "Industries of the Future" and "Inventions and Innovation"

Several Small Business Administration programs are also profiled. In total, they provide billions of dollars in assistance annually to all types of small businesses, including manufacturers. Programs include:

- general-business loan guarantees, the Section 7(a) program, SBA's largest, which helps small businesses gain access to private capital to finance plant construction, conversions, and expansions, as well as acquire equipment, facilities, and supplies;

- special programs targeted to women and minority small business owners;
- development company guarantees, through Section 504, of debentures issued by certified public-private development groups to provide companies with long-term, fixed-asset financing;
- Small Business Investment Companies, SBICs, licensed by SBA to make venture and other equity investments in emerging small companies;
- technical assistance available through small business development centers (SBDCs).

Other programs profiled include:

- the Manufacturing Extension Partnership operated by the National Institute of Standards and Technology; and
- NASA's National Technology Transfer Network.

In each case, several types of information are provided so the reader can determine the nature of the support out there, what it can do, and who is eligible to receive it:

- program description and objective or mission -- what does it do, and what is it designed to achieve?
- eligible activities -- what can be done or what can be supported or financed with program resources?
- program costs and services;
- agency contacts -- address, phone, fax, and e-mail information for the program's headquarters office, as well as local or regional program centers.
- other contacts -- lists of banks and other program partners.

United States Department of Energy The Office of Energy Efficiency and Renewable Energy

Overview

The Office of Energy Efficiency and Renewable Energy (EE) develops cost-effective energy efficiency and renewable energy technologies that protect the environment and support the Nation's economic competitiveness. EE achieves this goal through a strong and balanced program of research, development, and market deployment through private sector partnerships. EE is organized around the four main energy users—utilities, industry, transportation, and buildings. This orientation toward end users has helped the technology development programs focus on addressing the needs of the marketplace.

Office of Industrial Technologies

Industry accounts for 37% of the energy we consume as a Nation. Virtually every manufacturing process uses more energy than necessary. The Office of Industrial Technologies (OIT) collaborates with industry to improve the energy efficiency and productivity of industrial processes. OIT manages programs to reduce energy use through new technologies in heat recovery, energy utilization, and industrial and municipal waste management. Other programs develop process improvements and innovations for specific energy-intensive industries such as pulp and paper, steel, and chemicals. In addition, applied research in combustion, biotechnology, advanced materials, and heat transfer will provide the foundation for future advances in technology. An active technology transfer program provides an effective link between the research and development programs and the community of potential users.

Office of Utility Technologies

Electricity now accounts for 36% of the Nation's energy consumption, and its use is expected to grow 15% by the end of the century. Increased energy efficiency and renewable energy could play a significant role in meeting that increased electrical demand. To that end, the Office of Utility Technologies (OUT) is working with industry to improve the cost and performance of renewable energy technologies, including photovoltaics, solar thermal power, biomass power, wind power, hydroelectric power, and geothermal energy. OUT encourages utility energy efficiency by managing research in advanced transmission and distribution technologies, high temperature superconductivity, and energy storage as well as by supporting programs that promote integrated resource planning.

Office of Transportation Technologies

Transportation consumes more than 60% of the oil used in this country, and almost half of that oil is imported. To reduce our Nation's dependence on foreign oil and reduce the air pollution caused by gasoline-powered vehicles, the Office of Transportation Technologies (OTT) supports research in electric and hybrid vehicles; fuel cells and other advanced power

sources; alternative fuels made from biomass and other renewable energy sources; and advanced materials such as high-temperature ceramics for gas turbine and diesel engines. OTT is a partner in the U.S. Advanced Battery Consortium—composed of the three major U.S. automakers, leading electric utilities, and battery companies—working to develop improved batteries for electric vehicles.

Office of Building Technologies

State and Community Programs. Residential and commercial buildings account for more than one-third of the Nation's total energy use and consume about two-thirds of the Nation's electricity. The Office of Building Technologies (OBT) supports private sector efforts in the building industry to improve energy efficiency and increase the use of renewable energy. OBT supports basic and applied research on building systems and materials, primarily focused on the building envelope and the indoor environment and how they interact in determining energy performance. Other OBT research activities focus on the equipment that provides heating, cooling, ventilation, lighting, hot water, and other services necessary for safe, efficient building operation. OBT also fulfills legislative requirements for DOE to set energy efficiency standards for buildings and household appliances.

Additional Information

Each of these programs offer many resources that are useful to industry. Further information can be obtained from our Customer Service Center at (800) 363-3732 or our web site at <http://www.eren.doe.gov>.

DOE/EE also has the following six regional support offices:

Chicago Regional Support Office

Contact: Val Jensen
Phone: (312) 886-8590
Fax: (312) 886-8561

Philadelphia Regional Support Office

Contact: Charlie Baxter
Phone: (215) 656-6955
Fax: (215) 656-6981

Boston Regional Support Office

Contact: Hugh Saussy
Phone: (617) 565-9710
Fax: (617) 585-9723

Denver Regional Support Office

Contact: Bill Becker
Phone: (303) 275-4801
Fax: (303) 275-4839

Atlanta Regional Support Office

Contact: Jim Powell
Phone: (404) 347-2837
Fax: (404) 347-3098

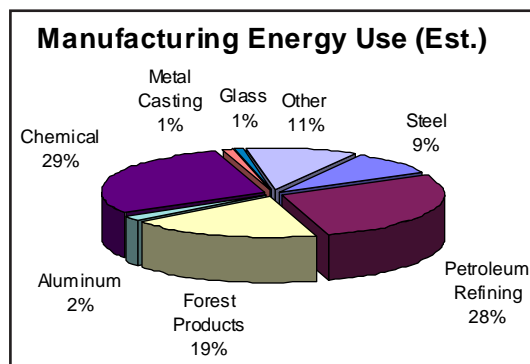
Seattle Regional Support Office

Contact: Kathy Vega
Phone: (206) 553-1132
Fax: (206) 553-2200

Industries of the Future Initiative

OBJECTIVE:	To help companies within the Department of Energy's <i>Industries of the Future</i> increase their competitiveness and decrease their environmental impact
ELIGIBILITY:	Business activity within one of seven <i>Industries of the Future</i>
COST:	No preset costs
SERVICES:	Coordinates Government and industry research efforts, provides access to existing Government technology, and allows the integration of industry-wide efforts

The Industries of the Future (IOF) initiative is a collaborative effort between DOE's Office of Industrial Technologies (OIT) and seven energy-intensive industries. These include the steel, aluminum, metalcasting, glass, chemicals, petroleum refining, and forest products industries. Collectively, these industries represent almost 80% of all manufacturing energy use. Because of their energy intensive nature, these industries stand to gain the most from advances in energy-efficient technologies. Often, however, the research and development costs required to realize significant cost reductions in these industries are prohibitively high, and individual firms, especially small firms, often lack the capacity to pursue such research.



The goal of IOF is to identify such high-risk, high-payoff technologies, and encourage industry-wide and industry-Federal cooperative research efforts. By identifying these promising but risky areas, industry can provide a roadmap for further Federal efforts, where, if appropriate, the National laboratory network can apply its research capability to best aid the needs of American industry.

Additionally, the IOF creates new lines of communication within and across industry groups, and between industry and the Government. These efforts help accelerate the development, dissemination, and use of innovative technologies.

The goals of the initiative, broadly defined by the Department of Energy are to:

- help identify leverage points by providing a means for matching National capabilities with technology needs and by establishing R & D partnerships between industry and Government participants;
- encourage more coordinated efforts by firms, universities, States, and Federal agencies;

- enable more coordinated and carefully focused Government support of industrial technology and foster intra- and inter-agency alliances within Government;
- simplify and streamline the process of working with Government, including contracting and procurement;
- stimulate the development and use of technologies that increase energy efficiency and lower the costs of environmental protection and regulatory compliance in industry;
- make it easier for industry to penetrate the maze of programs at DOE National labs, enable more effective use of the system's specialized and often very high-level technological capabilities, and help focus the competencies of DOE and other Federal labs on industrial applications.

As part of this process, the Laboratory Coordinating Council (which was formed in response to IOF input) helps expedite industry-wide access to the National laboratory system, including DOE facilities.

The IOF program is unique in its focus on the broadest level of industrial processes, and its industry-led nature. Individual firms, their suppliers, trade organizations, and other private participants direct the focus of the process. OIT offers to facilitate this process by:

- Helping to coordinate the input of the many stakeholders
- Assisting in the planning and provision of draft portions of the technology roadmaps
- Identifying other Government resources of potential interest to the industry
- Providing cost-sharing to many R & D projects identified through the IOF process

Central to the IOF process is the development of an industry vision document, which outlines the major challenges and opportunities existing within an industry, and sets strategic technical objectives and performance targets. From this document, a formal compact is developed, outlining the future collaborative efforts of the industry/Government coalition.



For more information, contact:

The Office of Industrial Technologies

EE-20

U.S. Department of Energy

1000 Independence Avenue, SW

Washington, DC 20585

Phone: 1-800-DOE-EREC

Web: <http://www.oit.doe.gov>

Climate Wise

OBJECTIVE:	To work with industry to find creative ways of using energy-efficient technology to improve industrial productivity, prevent pollution, and encourage economic growth
ELIGIBILITY:	All businesses
COST:	No preset costs
SERVICES:	Assistance in the identification and deployment of energy-efficient and environmentally friendly technologies that reduce the emission of greenhouse gasses

Climate Wise is a gateway program sponsored by the Department of Energy's Office of Industrial Technologies and the Environmental Protection Agency. The explicit goal of the program is the reduction of greenhouse gas emissions made by corporations either through their manufacturing activities, operations of the physical plant, or associated activities encountered through the course of business.

The centerpiece of the Climate Wise program is the Climate Wise Partnership Agreement, a one-page form that signifies enrollment in the program. Then, companies submit an Action Plan, which details their specific strategy for reductions in emissions. By joining the program, Climate Wise partners agree to initiate, expand, or accelerate cost-effective measures to improve efficiency and protect the environment.

In exchange, DOE offers extensive support for the enrolled company, including access to programs elsewhere listed in this manual. Climate Wise also publishes the names of participating companies, advertising their environmentally friendly nature to consumers nationwide. The list of Climate Wise participants is over 300 small and large manufacturing companies. Climate Wise partners include:

- Coors Brewing Company
- Dow Chemical Company
- DuPont
- ETTA Industries
- Fetzer Vineyard
- General Motors Corporation
- Georgia Pacific Corporation
- Johnson & Johnson
- Lockheed Martin
- Majestic Metal, Inc.
- Quad/Graphics
- Weyerhaeuser Company

Participation is not limited to any one industry or sector of the economy. Any company can participate, and each has something to contribute to the Nation's collective environmental goals. Total Petroleum, for example, is currently installing several state-of-the-art technologies: an advanced absorption refrigeration unit, a high transmission heat exchanger, and a number of lighting, motor system, and instrumentation upgrades. After these upgrades Total Petroleum increased its FCC capacity by 10%; recovered 200 barrels per day of fuel; eliminated flare NOx emissions, and saved \$1.4 million per year.



For more information, contact:

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1617 Cole Boulevard
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Pamela Herman

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U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Phone: (202) 260-4407

Fax: (202) 260-051

Industrial Assessment Centers (IACs)

OBJECTIVE:	To help small and medium-sized manufacturers improve productivity, reduce waste, and improve energy efficiency
ELIGIBILITY:	Small and medium-sized manufacturers (SIC 20-39, typically with 500 or fewer employees)
COST:	Free of Charge
SERVICES:	Technical assistance from graduate engineering students from affiliated university programs

Description

The Department of Energy's Office of Industrial Technologies has sponsored no-cost energy assessments for small and medium-sized manufacturers since 1976. Formerly known as the Energy Analysis and Diagnostic Center program (EADC), the Industrial Assessment Center Program currently operates 30 IACs covering territory in 42 states. The transition from EADCs to IACs reflects the expansion of the scope of the program from energy efficiency audits to the inclusion of productivity enhancement and waste reduction efforts.

Through October of 1996, IACs have conducted of 6,900 assessments for firms in 19 industrial subsectors. Plants employed less than 500 workers and generated less than \$75 million in gross sales. The average firm employed 160 workers and generated \$21 million in gross annual sales and \$364,000 in annual energy expenses.

Qualifications

IACs provide small manufacturers access to local engineering school expertise. Participating institutions hosting IACs have engineering programs with certification by the Accreditation Board for Engineering and Technology (ABET) and have been competitively selected. Student teams conducting these assessments are directed by faculty. Detailed professional reports are provided within 60 days of the visit. A follow-up inquiry is made within 6 to 9 months to confirm those recommendations that will be implemented.

Impact

Significant benefits accrue on the shop floor. Small firms often lack in-house expertise to identify the latest in energy efficient technology, or to implement the most effective money saving improvements. Providing independent, professional assessments, with a 50% implementation rate, energy audits have generated an average savings *per firm* of \$20,000 and 2 billion BTUs of energy. In broader IAC assessments, the average firm accepted 50% of IAC suggestions, recommending in an average savings of \$55,000.

Application Process

To qualify for an assessment, a plant must fall within Major Group D (Manufacturing) of the Standard Industrial Codes list. This group includes all SIC numbers between 2000 and 3900. In addition, the plant must be within 150 miles of an assessment center, and meet three of the following four criteria:

- Gross Sales of less than \$75 million
- Gross energy costs of more than \$75,000 and less than \$1,750,000
- A maximum of 500 employees
- Lack of in-house expertise in the assessment area



For more info, or to apply for an assessment, contact:

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Industrial Assessment Centers

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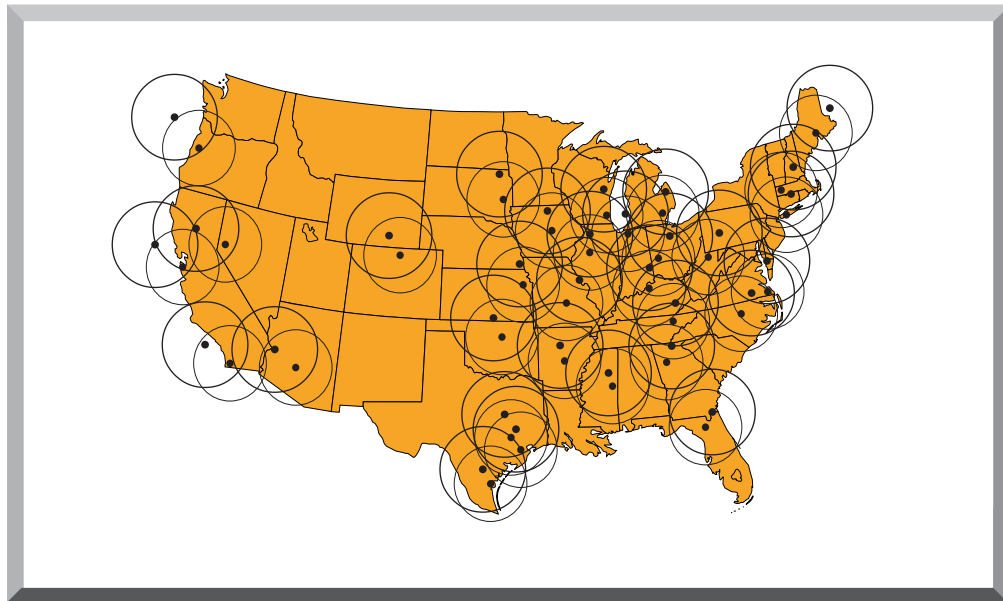
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Industrial Assessment Center Locations



Inventions and Innovation Program

Objective:	Provides funding and commercialization support for the development of energy saving inventions.
Eligibility:	Independent and small business applicants are given preference
Cost:	Free of Charge
Services:	Technical support and grants of up to \$100,000 (ERIP) and \$25,000 (InnCon) and two-day innovation workshops (NIW)

Energy Related Inventions Program (ERIP)

ERIP was founded in 1975 to encourage inventors and innovators to patent and commercialize concepts, products and processes that contribute significantly to energy efficiency or increases in available energy. Through 1992, 591 such projects had received support, averaging over \$85,000 per proposal. Total grants have exceeded \$38 million. The ERIP selection process is extremely rigorous, having screened over 33,000 applications to identify these particularly promising proposals.

Successful applicants complete a two-stage screening process directed by the National Institute of Standards (NIST), and are assigned an Invention Coordinator at the Department of Energy's Inventions and Innovation program upon referral from NIST to DOE. The coordinator initiates a market analysis of the submission with a DOE contractor, and provides a three-day workshop for the inventor. While at the workshop, the inventor works one-on-one with program faculty to develop a commercialization plan for the product.

In conjunction with the coordinator, the inventor reviews possible commercialization options, and develops a grant request for support from DOE. Support is provided through grant money, or DOE-sponsored testing at Government labs. Grant money is not provided for production costs such as assembly tooling.

The Application Process. To apply for support from DOE under the Energy Related Inventions Program, an invention or process must be energy related. For the purposes of the program, energy related means the product must significantly contribute to National energy savings or energy efficiency, or increase non-nuclear energy supplies. NIST uses this criteria as an initial screen, and rejects 50% of proposals as not energy-related.

Energy related proposals may be submitted to NIST along with form 1019, the *NIST Request for Evaluation* which is available from NIST or DOE (a copy is included here). Applications should clearly explain the invention's uniqueness, how its performance or cost is superior to currently available technology, and describe its possible impact on National energy use or reserves. Models should not be submitted, but drawings are encouraged.

If the submission is within the scope of ERIP (if it is energy related), it proceeds to the first stage of evaluation. Typically, this evaluation is performed by a Government scientist or engineer, but it may be referred to an outside expert. The findings of these experts are evaluated by an Office of Industrial Technology Evaluation and Assessment (OTEa) staff member. If the submission is determined to be promising, it is referred to the second stage of evaluation. A *promising* submission is deemed to be technologically feasible, commercially viable, and must be significantly contributory to National energy goals. Ten percent of eligible submissions pass the first phase.

The second stage of the evaluation is a more rigorous analysis of the product that seeks to confirm the results of the first stage evaluation. One third of first stage referrals are confirmed, and are then recommended to DOE for funding.



For more information, contact:

Office of Technology Evaluation and Assessment

National Institute of Standards and Technology

ATTN: ERIP

Gaithersburg, MD 20899

Phone: (301) 975-5500

E-mail: innovate@enh.nist.gov

Innovative Concepts Program (InnCon)

The Innovative Concepts Program is a targeted research program which issues a yearly or biannual topic related to energy, and encourages private-sector innovators to submit proposals in the target area. Through each cycle, 10-20 projects are selected and awarded \$15,000 to \$25,000 in seed money. In addition, each cycle culminates in a technology fair, where innovators present their projects to potential private-sector buyers. DOE aides innovators prior to the fair by sponsoring a workshop and providing commercialization and market analysis support.

<i>Track Record of Past Innovators</i>			
Fair Topic	Concepts Funded	InnCon Seed Money	Follow on Funding
Building Materials (1984)	12	\$171 K	\$1.3 M
Industrial Processes I (1985)	10	\$158 K	\$7.3 M
Seperations Processes (1988)	10	\$148 K	\$1.6 M
Building Retrofit (1989)	8	\$160 K	\$1.1 M
Waste Minimization I (1991)	15	\$300 K	\$1.2 M
Waste Minimization II (1993)	15	\$300 K	\$8.4 M
Industrial Processes II (1994)	16	\$330 K	\$0.8 M
Total for 7 Cycles	86	\$1,567 K	\$21.7 M

The topic for each cycle is announced in the Commerce Business Daily and the Federal Register. Prospective applicants may be placed on a mailing list by one of the contacts below. The application period for the 1997 cycle has just closed. Topics involved materials science and the aluminum industry. The research areas for the 1998 cycle will be announced in the spring of 1998.



For more info, or to be added to the mailing list, contact:

Ms. Robin Conger

Pacific Northwest Laboratory

K8-11

Box 999

Richland, WA 99352

Phone: (509) 372-4328

Fax: (509) 372-4369

E-Mail: rl_conger@pnl.gov

National Innovation Workshops

The Department of Energy also hosts a series of National Innovation Workshops. These events typically last two days, from 9 am to 5 pm on a Friday and Saturday. Each workshop offers a keynote and luncheon speaker, and covers such topics as:

- Patenting and Protection
- New Business Start-Up
- R & D and Venture Financing
- The Small Business Innovation Research (SBIR) Program
- Licensing and Marketing
- Business Plans
- The Energy Related Inventions Program

Upcoming events include:

Waterbury, Connecticut

October 16-18 1997

William Crutcher

Grager & Peterson

Phone: (203) 597-5100

Fax: (203) 757-7888



For more NIW information, contact:

Lisa Tunstall-German

U.S. Department of Energy
Inventions and Innovation Program, EE-20
1000 Independence Ave., SW
Washington, DC 20585

Phone: (202) 586-1478

E-Mail: lisa.tunstall-german@hq.doe.gov



For information about being an NIW Host, contact:

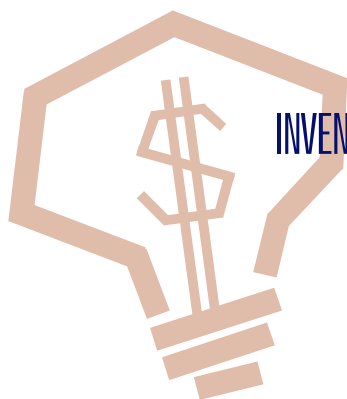
Wanda Hylton

NIW National Coordinator
Virginia Polytechnic University
2990 Telestar Court
Falls Church, VA 22042

Phone: (703) 698-6016

Fax: (703) 698-6062

E-Mail: whylton@vt.edu



INVENTION EVALUATION REQUEST

U.S. DEPARTMENT
OF COMMERCE

National Institute of Standards
and Technology

THIS BOX FOR OFFICIAL USE ONLY

INVENTOR NUMBER

ANALYST

DATE

DISPOSITION

TECHNICAL #

EVALUATOR

TECHNICAL CAT.

ENERGY CAT.

SERIAL # 148308

Public reporting burden for this collection of information is estimated to average 10 hours per response including the time to read the instructions. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Technology Innovation, National Institute of Standards and Technology, Gaithersburg, Maryland 20899-0001; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D. C. 20503.

INSTRUCTIONS FOR REQUESTING AN ENERGY-RELATED INVENTION EVALUATION Be sure you have read the Program Description and Policy Statement provided with this Form. Read the "Memorandum of Understanding" on the back of this Form. Check the appropriate box, sign and date, then complete the front page of this Form. Remember to make copies of this Form for your records. Prepare the material describing your invention in accordance with the instructions provided with this Form. Send this Form and the submission material describing the invention to: **Office of Technology Innovation, National Institute of Standards and Technology, Gaithersburg, Maryland 20899-0001.**

NAME OR TITLE OF INVENTION

BRIEF DESCRIPTION OF THE INVENTION

INVENTOR'S NAME

ADDRESS

CITY

STATE

ZIP

TELEPHONE

FAX

E-MAIL ADDRESS:

NAME AND ADDRESS OF OWNER, (IF DIFFERENT FROM THE INVENTOR)

ADDRESS

CITY

STATE

ZIP

TELEPHONE

FAX

E-MAIL ADDRESS

NAME AND ADDRESS OF SUBMITTER OR OTHER INTERESTED PARTY (IF DIFFERENT FROM THE INVENTOR)

ADDRESS

CITY

STATE

ZIP

TELEPHONE

FAX

E-MAIL ADDRESS

HAS THE INVENTION BEEN DESCRIBED TO OTHER AGENCIES OF THE FEDERAL GOVERNMENT?

☐ YES ☐ NO

(IF YES, DISCUSS IN THE INVENTION DESCRIPTION)

HAS THE INVENTION BEEN DISCLOSED TO ANY PRIVATE COMPANIES, PATENT ATTORNEYS, ETC.?

☐ YES ☐ NO

(IF YES, DISCUSS IN THE INVENTION DESCRIPTION)



IF A COMPANY IS INVOLVED,
PLEASE PROVIDE NAME

NUMBER OF
EMPLOYEES

ANNUAL
GROSS SALES

STATUS OF INVENTION DEVELOPMENT (Check appropriate box.)
(Use accompanying booklet on Engineering Stages of Development as a guide.)

- | | | | | | |
|-------------------------------------|---|--------------------------------------|---|---|---|
| <input type="checkbox"/> Conceptual | <input type="checkbox"/> Technical
Feasibility | <input type="checkbox"/> Development | <input type="checkbox"/> Commercial
Validation and
Product
Preparation | <input type="checkbox"/> Full Scale
Production | <input type="checkbox"/> Product
Support |
|-------------------------------------|---|--------------------------------------|---|---|---|

PATENT STATUS (Check one)

- | | | | | |
|---|--|--|--|--|
| <input type="checkbox"/> Not Patentable | <input type="checkbox"/> Not Applied For | <input type="checkbox"/> Disclosure
Document
Program | <input type="checkbox"/> Patent Applied
For | <input type="checkbox"/> Patent
Granted |
|---|--|--|--|--|

Patent Number(s)

MEMORANDUM OF UNDERSTANDING

I have read the *Program Description and Statement of Policy*. As the owner, or with the authority from the owner who is listed on this form, I have attached (or previously submitted) a disclosure of the identified invention for the purpose of evaluation by the National Institute of Standards and Technology (NIST) pursuant to Section 14 of Public Law 93-577.

I understand that to help protect property rights in an unpatented invention, an appropriate statement or notation should be applied to the title page or first page of the invention description and that if the description is so marked, the Government will consider all information that is in fact (a) trade secret or (b) commercial or financial information that is privileged or confidential, as coming within the exemption set out in 5 U.S.C. 552(b)(4). Accordingly, I have checked directly below, the box which is applicable to this invention.

YES NO

- | | | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | An appropriate statement has been applied to the information I have submitted. |
| <input type="checkbox"/> | <input type="checkbox"/> | Please apply an appropriate statement to all material I have submitted describing the invention to which this request pertains. (Example: This material contains commercial or financial information which is confidential.) |
| <input type="checkbox"/> | <input type="checkbox"/> | No statement is required because the information submitted is not confidential. |

I also understand that NIST will evaluate the invention described in the invention disclosure on the following conditions:

1. The Government will, in the evaluation process, restrict access to the description to those persons, within or without the Government, who have a need for purposes of administration or evaluation and will restrict their use of this information to such purposes.
2. The information submitted will not be returned and may be retained as a Government record.
3. The Government may make additional copies of the material submitted if required to facilitate the review process.
4. The acceptance of the information for evaluation does not, in itself, imply a promise to pay, a recognition of novelty or originality, or a contractual relationship such as would render the Government liable to pay for use of the information submitted.
5. The provisions of this *Memorandum of Understanding* shall also apply to additions to the disclosure made by me incidental to the evaluation of the invention.

IMPORTANT: The person signing below will be the addressee (others will receive copies) for all correspondence concerning the evaluation. Be sure that your address is in the appropriate address block on the front of this form.

Request is being submitted by

- | | |
|--|--------------------------------|
| <input type="checkbox"/> Inventor | <input type="checkbox"/> Owner |
| <input type="checkbox"/> Other (specify) | |

Signature of Submitter

Printed or Typed Name

Organization (if applicable)

Date

Motor Challenge

OBJECTIVE:	To promote a systems approach to the design, purchase, and management of electric motor-driven systems throughout the manufacturing sector
ELIGIBILITY:	All Businesses
COST:	Free of Charge
SERVICES:	Provides recommendations, technical support, and energy-saving information

Description

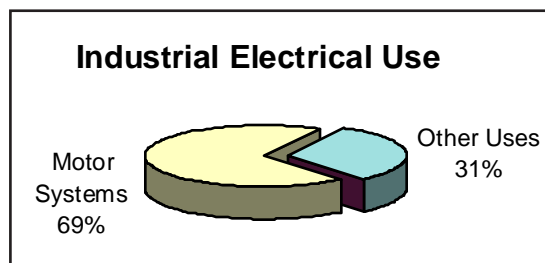
Seventy percent of all industrial electricity use is spent powering motors supporting the manufacturing process and physical plant operations. Optimizing inefficient motor systems provides an opportunity to reduce the electrical consumption of buildings and manufacturing plants, saving firms money and decreasing the environmental impact of the power generation needed to feed these motors.

The Department of Energy's Motor Challenge program provides the information and support necessary to reduce dependence on outdated, mismatched, or otherwise inefficient motor systems. The Office of Industrial Technologies (OIT) estimates that improvements implemented through the Motor Challenge program will help industry

capture 2 billion kilowatt-hours (kwh) per year of electricity savings by the year 2000 through the use of energy-efficient electric motor systems. This figure translates to \$100 million in energy cost savings and 0.5 million metric tons of carbon equivalent in emissions reduction per year. Individual manufacturers stand to save 10-20% (sometimes as much as 30%) through the replacement of inefficient motor systems. In electrically intensive production lines, this translates into a 6% to 18% reduction in *overall* production costs.

Industry Partnerships include:

- Compressed Air and Gas Institute
- Hydraulic Institute
- Air Movement and Control Association
- Electrical Apparatus Service Association
- National Electrical Manufacturers Association



Qualifications

OIT's Motor Challenge goal is to provide market-driven solutions to industry partners through the latest in product information and technical support. To ensure access to the latest and most profitable information, Motor Challenge has teamed up with industry trade associations and other private-sector entities. This relationship allows the Motor Challenge program to offer the most up-to-date advice, allowing end-users to make the most cost-effective decisions possible.

Motor Challenge at Work: Peabody Holding

Peabody Holding, a large US coal producer, recently improved the pumping system at its Randolph Coal Preparation Center. By replacing three parts — the motor, the belt drive, and the pump — Peabody realized savings of \$5,000 per year from improvements in a single 100 horsepower system. In conjunction with U.S. Electric Motors, Georgia Iron Works Industries, Illinois Power Co., and The Benham Group, Peabody sponsored a Motor Challenge Showcase Demonstration, with power savings validated by an independent DOE performance audit.

The Randolph plant operates six cyclone pumps as part of its coal washing process. Each pump was equipped with a 10" suction and discharge, a 32" impeller, and was driven by a 100 horsepower motor with a V-belt drive. By replacing the motor with an energy efficient model, replacing the V-belt with a toothed belt, and by reducing the pump and impeller size, the operating cost of a single pumping system was reduced by \$5,000 annually.

Motor Challenge Partnership

Joining as a Motor Challenge partner is the entry point into the program. By April 15, 1997, 1,942 establishments had joined the partnership and received:

- a copy of the MotorMaster+ software (described below);
- access to the Motor Challenge Information Clearinghouse, providing up-to-date technical information and support;
- a subscription to the Motor Challenge bimonthly newsletter, *Turning Point*.

In addition, partners serve as a guiding force for the Motor Challenge ensuring that the program remains focused on meeting the needs of U.S. Industry.

Motor Challenge Allied Partnership

The Motor Challenge Allied Partnership aids suppliers in increasing the energy efficiency awareness of customers. Each Allied Partner completes an Action Plan outlining how it plans to work with the Motor Challenge program, distribute information products, cooperate in training activities, and/or provide other types of assistance to industrial end users. In exchange, these Allied Partners have access to the broad array of Motor Challenge publications and decision tools, which they distribute to industrial end user customers during daily business or in conjunction with customer education meetings or workshops.

Excellence Partnership

Excellence Partners make an extended commitment to system optimization by pursuing continual improvements in electric motors and motor systems. In addition to joining the Motor Challenge Partnership, Excellence Partners:

- develop and implement a motor systems management plan with defined energy savings goals;
- establish a benchmark, and monitor energy saving through the life of the project;
- report energy savings progress to the Motor Challenge program.

In exchange, the member establishment gains tailored resources that help manage the upgrade process for a project involving an entire company, specific plant or department, or even a single process.

MotorMaster+ Software

The MotorMaster+ Software is an integrated motor selection and maintenance package which provides companies with the selection tools necessary to assure a correct motor-to-installation match. The package contains a database which carries up-to-date information on more than 13,800 3-phase National Electric Manufacturers Association Design A and B induction motors. The motors range from 1 to 600 horsepower, and have speeds ranging from 900 to 3600 RPM. The database tracks motor efficiency (as measured by the Institute for Electronic and Electrical Engineers (IEEE) 112 Test Method B protocol), part-load efficiency, power factor, full-load speed, torque, voltage, list price, warranty, utility rebate

schedules and rebate qualification requirements. Price, performance and efficiency can easily be compared among a number of motors appropriate for a given task. In addition, MotorMaster+ software can track motor inventory, operational data, life cycle cost forecasting, and energy accounting and evaluation through its Savings Tracker module.

The screenshot displays the 'Motor Catalog Detail' window of the MotorMaster+ software. It features a form with various input fields and a table of performance metrics. The form includes fields for Manufacturer (US Motors), Model (PREMIUM EFF / UTE), Catalog (A44), Motor type (NEMA Design B), Size (HP) (20), Full load speed (RPM) (1775), Speed (RPM) (1800), Enclosure type (TEFC), Frame No. (2561), Voltage rating (230/460 volts), and Definite purpose. There are also checkboxes for U-Frame, Vertical shaft, and C-Frame, and a Service factor field (1.25). The table on the right provides data for Efficiency (%), Power Factor (%), Torque (ft-lb), Amperage (amps), Stalled rotor time (sec.), and Peak voltage. A note at the bottom states: 'For multi-voltage motors, amperage data shown is consistent with operation at 460 volts. See HELP topic "Interpreting a Motor Record" for more information.'

Efficiency (%)		Power Factor (%)	
Full Load	93.6	Full Load	94.0
75% Load	94.2	75% Load	93.1
50% Load	94.1	50% Load	92.9
25% Load	91.6	25% Load	90.4

Torque (ft-lb)		Amperage (amps)	
Full Load	58.3	Full Load	23.6
Breakdown	136.2	Idle	6.6
Locked Rotor	133.9	Locked Rotor	139.9

Stalled rotor time (sec.)		Peak voltage	
Hot		@ 8 ms	
Cold		@ 5 ms	



For more information, contact:

The Motor Challenge Information Clearinghouse

P.O. Box 43171

Olympia, WA 98504-3171

Phone: (800) 862-2086

Fax: (360) 586-8303

E-mail: motors@eicbbs.wseo.wa.gov

Web: <http://www.motor.doe.gov>

Or contact one of the following regional offices:

Office: **Atlanta Support Office**

Contact: Tim Eastling

Address: 730 Peachtree Street

Suite 876

Atlanta, GA 30308

Phone: (404) 347-7141

Fax: (404) 347-3098

States: NC, TN, NC, SC, GA, AL, FL,
MS, LA, AK plus PR, VI and
US Caribbean possessions

Office: **Chicago Support Office**

Contact: Sharon Gill

Address: One South Wacker Drive

Suite 2380

Chicago, IL 60606

Phone: (312) 886-8573

Fax: (312) 886-8561

States: MI, OH, IN, IL, WI, MN,
IA, MO, KY

Office: **Philadelphia Support Office**

Contact: Leah Boggs

Address: 1800 John F. Kennedy Blvd.

Suite 501

Philadelphia, PA 19103-7483

Phone: (215) 656-6976

Fax: (215) 656-6981

States: NJ, PA, WV, MD, VA, DE,
and Washington, DC

Office: **Boston Support Office**

Contact: Roxanne Danz

Address: One Congress Street

Room 1101

Boston MA 20211

Phone: (617) 565-9714

Fax: (617) 565-9723

States: ME, VT, NH, CT, RI, MA, NY

Office: **Denver Support Office**

Contact: Barbara Alderson

Address: 1617 Cole Blvd.

Golden, CO 80401

Phone: (303) 275-4821

Fax: (303) 275-4800

States: ND, SD, NE, KS, OK, TX, NM,
CO, WY, MT, UT

Office: **Seattle Support Office**

Contact: Julia Oliver

Address: 1301 Clay Street

Room 450N

Oakland, CA 94612-5219

Phone: (510) 637-1952

Fax: (510) 637-2017

States: WA, OR, ID, NV, CA, AZ, HI
and the Pacific Territories

National Industrial Competitiveness Through Energy, Environment, and Economics (NICE³)

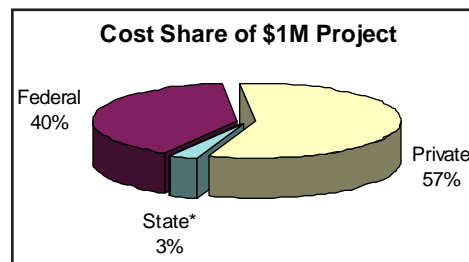
OBJECTIVE:	To facilitate the commercialization of technologies that promote energy efficiency, clean production, and economic competitiveness in industry
ELIGIBILITY:	Cooperative State/private efforts meeting certain criteria
SERVICES:	NICE ³ provides one-time funding of up to \$425,000 for projects selected on a competitive basis. Non-Federal cost-share of at least 55% of the total project cost is required.

The intent of the NICE³ program is to promote the initial commercialization of pollution and energy saving technologies that will enhance the competitiveness of American industry. This is accomplished through an innovative cooperative structure fostering alliances between State Governments and the private sector. To be considered for NICE³ funding, industry applicants must submit proposals through State energy, environment, or business development offices. Since its inception in 1991, NICE³ has funded 78 projects with \$25 million.

NICE³ selection criteria fall into three categories. Preference is given to projects based on environmental impact, industrial classification, and success in improving the competitiveness of the underlying process. DOE lists the following specific criteria:

- Concept Description
- Cost Efficiency
- Energy Savings
- Competitiveness
- Impact on Jobs
- Innovation
- Application Capabilities
- Waste Reduction
- Commercialization/Marketing Plan

Because of their energy- and waste-intensive nature, further preference is given to projects that promote the visions of the industries in the Office of Industrial Technologies' Industries of the Future initiative, including the aluminum, chemicals, forest products, glass, metalcasting, petroleum refining, and steel industries. Several areas have been excluded from the program, including nuclear waste and radiation; electromagnetic radiation (EMF); waste treatment and disposal; hazardous waste site remediation; cross-media contamination shifts; municipal solid waste collection or separation; and noise abatement.



1998 Solicitation Timeline

The 1998 NICE³ Solicitation opens August 1, 1997, and closes on December 10, 1997, though some States may have earlier deadlines for submission to their offices. Optional two page abstracts will be accepted through July 1, 1997, and comments will be returned within two weeks. Technical evaluations of the proposals, and the meeting of the National Selection Panel, will occur in February 1998. Award announcements will be made in March 1998.



Questions regarding 1997 solicitations should be made to:

Robert Brown

Department of Energy, Atlanta Regional Support Office
730 Peachtree Street, Suite 876
Atlanta, GA 30308

Phone: (404) 347-3098

E-mail: robert.brown@hq.doe.gov

The following addresses are for submitting the applications:

**U.S. Department of Energy
Atlanta Regional Support Office**

Attn: Robert Brown
730 Peachtree Street
Suite 876
Atlanta, GA 30308
(AL, AR, FL, GA, KY, MS, PR,
NC, SC, TN, VI)

**U.S. Department of Energy
Boston Regional Support Office**

Attn: Jean Crocker
One Congress Street
11th Floor
Boston MA 20214
(CT, ME, MA, NH, NY, RI, VT)

**U.S. Department of Energy
Seattle Regional Support Office**

Attn: Reggie James
800 Fifth Avenue
Suite 3950
Seattle, WA 98104
(AK, AZ, CA, HI, ID, NV, OR, WA,
AS, GU, PW)

**U.S. Department of Energy
Denver Regional Support Office**

Attn: Margaret Learmouth
1617 Cole Blvd.
Bldg. 17-3
Golden, CO 80401
(CO, KS, LA, MT, NE, NM, ND,
OK, SD, TX, UT, WY)

**U.S. Department of Energy
Philadelphia Regional Support Office**

Attn: Karen Conklin
1800 John F. Kennedy Blvd.
5th Floor
Philadelphia, PA 19102
(DE, DC, MD, NJ, PA, VA, WV)

**U.S. Department of Energy
Chicago Regional Support Office**

Attn: Lynda Keammerlen
One South Wacker Drive
Suite 2380
Chicago, IL 60606
(IL, IN, IA, MI, MN, MO, OH, WI)

The Award

At least 55% of the cost of the project must be shared by the State and the industrial partner. The remaining 45% will be awarded by the Federal Government, up to \$400,000 for expenses incurred by the private partner over a three-year period. The lesser of \$25,000 or 10% of the total award may be given to the State (for a maximum Federal contribution of \$425,000, or 45%) for expenses such as technology transfer and marketing. The private partner may not gain a profit, or collect a fee associated with the award. Approximately \$5 million was available for the 1997 proposal cycle. At the end of the three year period, it is expected that the process or practice will be commercialized.

NICE³ Active State Participants

Alabama

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401 Adams Ave., Ste. 550
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Connecticut (con't)

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Fax: (302) 739-5060

District of Columbia

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Twin Towers Bldg.
2600 Blair Stone Rd.
Tallahassee, FL 32399-2400
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Fax: (904) 921-8061

Tom McPherson
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Tallahassee, FL 32399-2100
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Fax: (904) 488-7688

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Fax: (404) 651-5130

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Economic Development, and
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Gerry Galinato
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Resources
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Boise, ID 83720-0098
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Dan Merkler
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DOE National Laboratory Resources

OBJECTIVE:	To provide access to the knowledge, resources, and expertise of DOE's premier laboratories.
ELIGIBILITY:	All
COST:	Some services provided free of charge, others vary in cost
SERVICES:	Extensive variety

Services

DOE offers a number of technology partnership programs providing manufacturers with access to the tremendous resources and problem solving capacities of these premier facilities. DOE labs have a long history of excellence in a number of fields related to industrial processes including applied energy research; systems engineering; pollution control and remediation; materials science; instrumentation; biotechnology; advanced manufacturing; software; and transportation technology. By taking advantage of the expertise and facilities available from the labs, businesses gain access to top level scientific and engineering capabilities, realize significant savings through the use of existing facilities, and find solutions to difficult problems that are not obtainable elsewhere.

Companies that are partners in the Alliance/Climate Wise program are encouraged to apply for up to one week of free technical assistance from a researcher at the Alliance Virtual laboratory. Five National labs participate in the Virtual Lab: Argonne National Laboratory (ANL), National Renewable Energy Laboratory (NREL), Oak Ridge National Laboratory (ORNL), Pacific Northwest National Laboratory (PNNL), and Sandia National Laboratory (SNL). Each of these labs has world-class expertise in industrial energy efficiency and pollution prevention technologies. DOE's Golden Field Office coordinates requests and identifies the laboratory with the best resources to respond to the partner's technical inquiry. Since funding for this activity is limited, not all requests will be granted. Priority is given to companies that fall within ten industries of strategic importance to Climate Wise; aluminum, chemicals, forest products, glass, metalcasting, steel, refining, metal finishing, printing, and food processing. For further information about the Virtual Lab, please contact Pat Schassburger, DOE Golden Field Office at (303) 275-4795.

DOE provides a number of other avenues that allow businesses of all sizes to take advantage of and develop relationships with the National laboratories. Each lab offers a number of programs targeted toward transfer of technology to the private sector. The following programs are available from all of the labs, with some variations in the program names and application processes.

Companies are invited to contact each lab directly to receive further information about these and other programs:

- **CRADAs:** Under a Cooperative Research and Development Agreement (CRADA) both parties contribute to the cost of research. Your company may elect to retain ownership in any resulting intellectual property it develops. For intellectual property developed by the National laboratory under the CRADA, your company has the right to negotiate an exclusive license within a limited field of use with reasonable compensation to the laboratory. Your company may either provide funding for work at the National lab or make an “in-kind” contribution to the CRADA. Proprietary information remains confidential, and results of the CRADA work can be protected from disclosure for a period of up to five years after the completion of the work.
- **Work for Others:** Work for others is DOE’s term for research and development where full costs are paid entirely by a non-DOE entity, such as a company, and the work is conducted by the National laboratory. When a company contracts with a lab to perform, Work for Others, the commercial rights to intellectual property belong to the company, and research results may be kept proprietary.
- **Licensing:** Licensing provides companies with opportunities to acquire exclusive or non-exclusive rights to DOE-owned inventions and software in order to develop them into marketable products and processes. Often licensing is done as part of a CRADA or Work for Others contract.
- **Quick Response Mechanisms:** Quick response mechanisms include several types of agreements designed to facilitate work that is short-term or requires a rapid turnaround time, including personnel exchanges and technical consulting where a National laboratory’s unique expertise is needed and the development of intellectual property is unlikely.

Department of Energy National Laboratory Contacts

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Manufacturing Extension Partnership (MEP)

OBJECTIVE:	To provide a National network of services to assist small manufacturing establishments adopt modern technologies and business practices
ELIGIBILITY:	Manufacturing firms with fewer than 500 employees.
COST:	Fee structures for client firms vary depending on the service(s) requested and the center that is involved.
SERVICES:	Technical assistance for improving productivity and efficiency

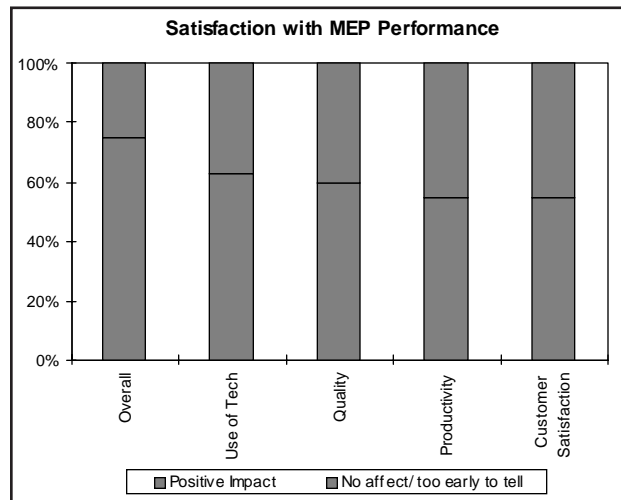
The **Manufacturing Extension Partnership (MEP)** links Federal support with State and local organizations to assist small manufacturers in adopting modern technologies and business practices that help increase their competitive ability in the global marketplace. The goal of the MEP is to provide smaller firms, who are unable to realize their full potential because of a lack of access to technological resources, an upper hand in this environment.

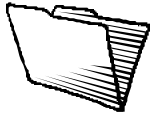
MEP services include helping businesses assess their technology and business needs, developing specific improvements to increase productivity, and providing guidance with manufacturing processes, worker training, personnel, marketing, financing, and quality issues. Some centers also offer demonstrations of new technologies. MEP staff work individually with manufacturers, as well as with groups of manufacturers who share common needs. Each center's

assistance programs vary according to the needs of the region's manufacturing base, but each is connected electronically to a National network, allowing access to a nationwide pool of knowledge, services and technology.

In 1994, agents from the 28 then active MEP centers provided services or made visits to more than 15,000 companies. The centers offered training and educational services to employees and managers representing an additional 5,000 firms. The real success of MEPs is demonstrated by the successes of the average company after working with a MEP center:

- 5.5 jobs added or saved;
- increases of \$370,000 in sales;
- \$43,000 reduction in labor and materials costs.





For more information, contact:

The Manufacturing Extension Partnership

Building 301, Room C121

National Institute of Standards and Technology

Gaithersburg, MD 20899-0001

Phone: (301) 975-5020

Fax: (301) 963-6556

E-mail: mepinfo@micf.nist.gov

Web: <http://www.mep.nist.gov>

Or contact your local center directly using the following directory.

Manufacturing Extension Partnership Office Locations



Manufacturing Extension Center Directory

Alabama

Alabama Technology Network

Alaska

Alaska Manufacturing
Extension Partnership

Arizona

Industry Network Corporation
(INC)

Arkansas

Arkansas Manufacturing
Extension Network

California

California Manufacturing
Technology Center (CMTC)

The Corporation for
Manufacturing Excellence
(Manex)

San Diego Manufacturing
Extension Center, Inc.

Colorado

Mid-America Manufacturing
Technology Center
(MAMTC)

Connecticut

Connecticut State Technology
Extension Program (CONN/
STEP)

Delaware

Delaware Manufacturing
Alliance

Florida

Florida Manufacturing
Extension Partnership

Georgia

Georgia Manufacturing
Extension Alliance

Hawaii

Hawaii Manufacturing
Extension Center

Idaho

Idaho Manufacturing Alliance

Illinois

Chicago Manufacturing
Center

Illinois Manufacturing Center

Indiana

Indiana Business
Modernization and
Technology Corporation
(Indiana BMT)

Iowa

Iowa Manufacturing
Technology Center (Iowa
MTC)

Kansas

Mid-America Manufacturing
Technology Center
(MAMTC)

Kentucky

Kentucky Technology Service

Louisiana

Louisiana Manufacturers
Technical Extension Center

Maine

Maine Manufacturing
Extension Partnership

Maryland

Maryland Technology
Extension Service (MTES)

Massachusetts

Massachusetts Manufacturing
Partnership (MMP)

Michigan

Michigan Manufacturing
Technology Center (MMTC)

Minnesota

Minnesota Manufacturing
Technology Center (MnMTC)

Mississippi

Mississippi Polymer Institute
(MPI) and Pilot
Manufacturing Extension
Center (PMEC)

Mississippi Technology
Extension Partnership

Missouri

Mid-America Manufacturing
Technology Center
(MAMTC)

MAMTC Missouri Rolla
Regional Office

Montana

Montana Manufacturing
Extension Center

Nebraska

Nebraska Industrial
Competitiveness Service
(NICS)

Nevada

Nevada Manufacturing
Extension Partnership

New Hampshire

New Hampshire Regional
Manufacturing Technology
Center

New Jersey

New Jersey Manufacturing
Extension Partnership

New Mexico

Industry Network Corporation

New York

New York Manufacturing
Extension Partnership (New
York MEP)

Alliance for Manufacturing
and Technology (AM&T)

Center for Economic Growth

Central New York TDO

CI-TEC

High Technology of Rochester

Hudson Valley Technology
Development Center
(HVTDC)

Industrial Technology
Assistance Corporation (ITAC)

Long Island Forum for
Technology (LIFT)

Mohawk Valley Applied
Technology Commission

Western New York
Technology Development
Center

North Carolina

North Carolina
Manufacturing Extension
Partnership

North Dakota

North Dakota Manufacturing
Technology Partnership
(NDMTP)

Ohio

Great Lakes Manufacturing
Technology Center (GLMTC)

Miami Valley Manufacturing
Extension Center

Lake Erie Manufacturing
Extension Partnership

Plastics Technology
Deployment Center (PTDC)

Oklahoma

Oklahoma Alliance for
Manufacturing Excellence

Oregon

Oregon Manufacturing
Extension Partnership

Pennsylvania

North/East Pennsylvania
Manufacturing Extension
Partnership and
Manufacturers Resource
Center (MRC)

Southeastern Pennsylvania
Manufacturing Extension
Partnership, Delaware Valley
Industrial Resource Center
(DVIRC), and Manufacturing
Technology Industrial
Resource Center (MANTC)

Industrial Modernization
Center (IMC) and
Northeastern Pennsylvania
Industrial Resource Center
(NEPIRC)

Southwestern Pennsylvania
Industrial Resource Center
(SPIRC)

Great Lakes Manufacturing
Technology Center

Plastics Technology
Deployment Center

Puerto Rico

Puerto Rico Manufacturing
Extension, Inc (PRIMEX)

Rhode Island

Rhode Island Manufacturing
Extension Services

South Carolina

Southeast Manufacturing
Technology Center (SMTC)

South Dakota

South Dakota Manufacturing
Extension Partnership Center

Tennessee

Tennessee Manufacturing
Extension Partnership

Texas

Texas Manufacturing
Assistance Center

Utah

Utah Manufacturing
Extension Partnership

Vermont

Vermont Manufacturing
Extension Center

Virginia

A.L. Philpott Manufacturing
Center

Washington

Washington Manufacturing
Extension Partnership

West Virginia

West Virginia Partnership for
Industrial Modernization

Wisconsin

Northwest Wisconsin
Manufacturing Outreach
Center (NWMOC)

Wisconsin Manufacturing
Extension Partnership

Wyoming

MAMTC Wyoming Reg. Ofc.

National

National Center for Printing,
Publishing and Imaging

National Metal Finishing
Resource Center (NMFRC)

National Technology Transfer Network

OBJECTIVE:	To disseminate technology and information findings
ELIGIBILITY:	Any U.S. company
COST:	No initial cost for service
SERVICES:	Guarantees commercial loans of up to \$750,000

The National Technology Transfer Network (NTTN)



The NTTN is a NASA-funded program that provides access to the National network of research facilities as a one-stop-shop for technology transfer, licensing, technical assistance, and other business assistance programs. At the center of the program is the National Technology Transfer Network. The NTTN acts as a clearinghouse of information, and is augmented by six Regional Technology Transfer Centers (RTTCs). Programs offered by the NTTC are outlined below. The RTTCs offer additional commercialization and business management services.

The National Technology Transfer Center (NTTC)



NTTC is the hub of a National network established by Congress to link U.S. companies with Federal laboratories to turn Government research results into practical, commercially-relevant technology. The Center's free Gateway Service, staffed by specialists in biology, physics, chemistry, computer sciences, and the various branches of engineering, provides private sector callers with person-to-person contacts in the Federal laboratory system. NTTC technology agents have facilitated requests in a wide range of areas including: materials, computer and information systems, biotechnology, agriculture, transportation, energy and environmental innovations, electronics, and defense-related R & D with commercial applications.

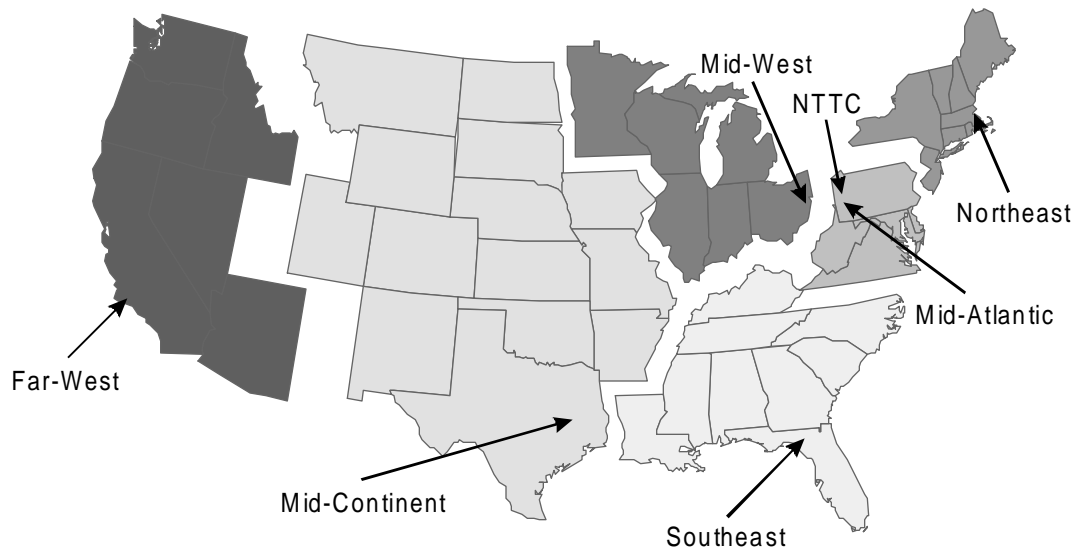
The center also conducts National outreach and promotional activities to improve U.S. private sector awareness of technology transfer resources and opportunities. NTTC assists Federal laboratories in finding partners to develop and commercialize new technologies. The Center works closely with the Federal Laboratory Consortium, Federal, State and local economic development authorities, academia, companies and industry associations, and makes referrals to the six RTTCs, which assist companies with customized services for licensing and other commercialization areas.



To contact the NTTC:

The NTTC's Gateway Service operates between 8:30 am and 5:00 pm, EST at 800-678-6882.

Regional Technology Transfer Centers (RTTC)



J. Ronald Thornton, Director
Southern Technology Application Center
University of Florida,
College of Engineering
Box 24
One Progress Boulevard
Alachua, FL 32615
Phone: (904) 462-3913

Lani S. Hummel, Director
Mid-Atlantic RTTC
University of Pittsburgh
823 William Pitt Union
Pittsburgh, PA 15260
Phone: (412) 648-7000
Fax: (412) 648-7003

Dr. William Gasko, Director
Center for Technology Commercialization
Massachusetts Technology Park
100 North Drive
Westborough, MA 01581
Phone: (508) 870-0042

Gary Sera, Director
Mid-Centroid Technology Transfer Center
(MCTTC)
The Texas A&M University System
College Station, TX 77843-3401
Phone: (800) 472-6785
Phone: (409) 845-8762
Fax: (409) 845-3559

Chris Coburn, Director
Great Lakes Technology Transfer Center
25000 Great Northern Corporate Center
Suite 260
Cleveland, OH 44070-5310
Phone: (216) 734-0094
Web: <http://www.battelle.org/glitec>

Robert L. Stark, Director
University of Southern California
3716 South Hope Street, Suite 200
Los Angeles, CA 90007-4344
Phone: (213) 743-6132
Fax: (213) 746-9043

Small Business Development Centers

OBJECTIVE:	To provide information to existing and prospective small business owners and operators
ELIGIBILITY:	Existing or prospective small business owners and operators, entrepreneurs, or persons interested in exploring small business activity
COST:	Initial consultations are generally free; charges may be levied for additional services
SERVICES:	Business and management counseling, training, and technical assistance

The Small Business Administration (SBA) created the **Small Business Development Center** network in 1977 to offer company owners and prospective entrepreneurs the opportunity to obtain information relevant to small business activities. There are 56 lead SBDCs, and nearly 1,000 satellite locations. They serve as one-stop service centers, providing small businesses with a wide variety of information and assistance. SBDC services include, but are not limited to, assisting small businesses with:

- Financial issues
- Marketing
- Production
- Organization
- Engineering
- Feasibility studies
- Solutions to technical problems

Special SBDC programs and economic development activities include international trade assistance, technical assistance, procurement assistance, venture capital formation, and rural development.

Because each center serves only a limited area, its staff can design and administer programs to address specific needs of the local business base. The typical SBDC operates with a small staff including a director, full and part-time assistance experts, and volunteers. Centers also use paid consultants, consulting engineers, and testing laboratories to help clients needing specialized expertise.

SBDCs make special efforts to reach members of socially and economically disadvantaged groups, veterans, women, and the disabled. Assistance is provided to any current and prospective owners who could not otherwise afford the services of a private consultant.



To contact the SBA:

SBA has offices located throughout the country. To obtain a listing of offices in your State, call SBA at 1-800-U-ASK-SBA, or consult the following phone directory.

Telephone Guide for SBA Small Business Development Centers

University of Alabama, Birmingham, AL	(205) 934-7260
University of Alaska/Anchorage, Anchorage, AK	(907) 274-7232
Maricopa County Community College, Tempe, AZ	(602) 731-8202
University of Arkansas, Little Rock, AR	(501) 324-9043
California Trade and Commerce Agency, Sacramento, CA	(916) 324-5068
Office of Business Development, Denver, CO	(303) 892-3809
University of Connecticut, Storrs, CT	(203) 486-4135
University of Delaware, Newark, DE	(302) 831-2747
Howard University, Washington, DC	(202) 806-1550
University of West Florida, Pensacola, FL	(904) 444-2060
University of Georgia, Athens, GA	(706) 542-6762
University of Hawaii at Hilo, Hilo, HI	(808) 933-3515
Boise State University, Boise, ID	(208) 385-1640
Dept. of Commerce & Community Affairs, Springfield, IL	(207) 524-5856
Economic Dev. Council, Indianapolis, IN	(317) 264-6871
Iowa State University, Ames, IA	(515) 292-6351
Wichita State University, Wichita, KS	(316) 689-3193
University of Kentucky, Lexington, KY	(606) 257-7668
Northeast Louisiana University, Monroe, LA	(318) 342-5506
University of Southern Maine, Portland, ME	(207) 780-4420
University of Maryland, College Park, MD	(301) 405-2147
University of Massachusetts, Amherst, MA	(413) 545-6301
Wayne State University, Detroit, MI	(313) 577-4848
Dept. of Trade and Economic Development St. Paul, MN	(612) 297-5770
University of Mississippi, University, MS	(601) 232-5001
University of Missouri, Columbia, MO	(314) 882-0344
Department of Commerce, Helena, MT	(406) 444-4780
University of Nebraska at Omaha, Omaha, NE	(402) 554-2521
University of Nevada in Reno, Reno, NV	(702) 784-1717
University of New Hampshire, Durham, NH	(603) 862-2200
Rutgers University, Newark, NJ	(201) 648-5950
Santa Fe Community College, Santa Fe, NM	(505) 438-1362
State University of New York, Albany, NY	(518) 443-5398
University of North Carolina, Raleigh, NC	(919) 571-4154
University of North Dakota, Grand Forks, ND	(701) 77-3700
Dept. of Development, Columbus, OH	(614) 466-2711
S.E. Oklahoma State University, Durant, OK	(405) 924-0277
Lane Community College, Eugene, OR	(503) 726-2250
University of Pennsylvania, Philadelphia, PA	(215) 898-1219
Inter American University, Hato Rey, PR	(787) 763-5108
Bryant College, Springfield, RI	(401) 232-6111
University of South Carolina, Columbia, SC	(803) 777-4907
University of South Dakota, Vermillion, SD	(605) 677-5498
University of Memphis, Memphis, TN	(901) 678-2500
Dallas Community College, Dallas, TX	(214) 565-5833
University of Houston, Houston, TX	(713) 752-8444
Texas Tech University, Lubbock, TX	(806) 745-3973
University of Texas at San Antonio, San Antonio, TX	(210) 558-2450
Salt Lake City Community College, Salt Lake City, UT	(801) 957-3481
Vermont Technical College, Randolph Center, VT	(802) 728-9101
University of the Virgin Islands, St. Thomas, US VI	(809) 776-3206
Dept. of Economic Development, Richmond, VA	(804) 371-8258
Washington State University, Pullman, WA	(509) 335-1576
Governor's Office of Community and Industrial Development, Charleston, WV	(304) 558-2960
University of Wisconsin, Madison, WI	(608) 263-7794
University of Wyoming, Laramie, WY	(307) 766-3505

SBA 7(a) Loan Programs

Objective:	To provide loan guarantees to creditworthy small businesses unable to obtain financing from private lenders
Eligibility:	Small, independently-owned businesses that are not dominant in their fields. Size limitations vary by SIC code (generally at fewer than 500 employees)
Cost:	Vary with size and maturity of loan. Guarantee fees start at 2% of principle, interest starts at 225 basis points over the Prime Rate.
Services:	Guarantees commercial loans of up to \$750,000

SBA 7(a) Loan Guarantee Program Overview

The Small Business Administration's Section 7(a) Loan Guarantee program helps meet the financing needs of creditworthy small businesses, including manufacturers, that are unable to obtain traditional commercial loans. The 7(a) program attempts to expand credit availability to small, new, or under collateralized companies by reducing the risk of traditional lenders.

Toward this end, SBA offers loan guarantees of up to 80% of principle on loans of up to \$100,000, and up to 75% of principle of loans above \$100,000. The maximum amount of the guaranteed portion of the loan is generally capped at \$750,000 (on a \$1,000,000 loan). Maturities are capped at 25 years for loans used for real estate and equipment, and seven years for working capital loans.

In all 7(a) loan programs, SBA puts primary emphasis on sufficient cash flow to repay the loan when considering applications. Also important are good character, management capability, collateral, and the equity contributions of owners holding 20% or more of the company.

Eligibility

While most small businesses are eligible for consideration, loans are limited by several additional criteria, including the type and size of the business, use of the funds provided by the loan, and other special circumstances.

Excluded businesses include real estate investment and other speculative companies including Real Estate Investment Trusts (REITs), wildcatters, and junior exploration companies; academic, charitable, and religious institutions; lending organizations; pyramid schemes; and companies engaged in illegal or gambling-related activities.

While size constraints for SBA loans are specific to SIC codes, they adhere *in general* to the following table:

Industry	Maximum Size
Retail and Service	\$3.5 to \$13.5 million
Construction	\$7 to \$17 million
Agriculture	\$.5 to \$3.5 million
Wholesale	No more than 100 employees
Manufacturing	500 to 1,500 employees

Certain restrictions apply to what the loans may be used for. SBA loans *cannot* be used to:

- finance floor plan needs;
- purchase real estate where the participant has issued a forward commitment to the builder/developer, or where the real estate will be held primarily for investment purposes;
- to make payments to owners or pay delinquent withholding taxes;
- to pay existing debt unless refinancing will benefit the small business, and where the need to refinance is not indicative of imprudent management.

Certain other restrictions may apply to franchises, recreational facilities and clubs, farms, fishing vessels, holding companies, and medical facilities.

Fees and Interest

SBA charges commercial lenders a guaranty and servicing fee for 7(a) loans, which may be passed on to the borrower once paid to SBA by the lender. These fees are determined by the size of the guaranteed portion of the loan, according to the following schedule:

Loan Amount	Guarantee Fee
Less than \$80,000	2%
More than \$80,000 but under \$250,000	3%
Amounts over \$250,000	\$7,500 plus 3.5% of amount over \$250,000
Amounts over \$500,000	\$16,250 plus 3.875% of amount over \$500,000

In addition, an annual .5% servicing fee is applied to the outstanding guaranteed balance.

Interest Rates

While interest rates are negotiated between the borrower and the lender, they are subject to maximum rates set by SBA, and vary with the amount of the loan and its maturity. Fixed rate loans are capped at 2.25% to 4.75% over prime, and are determined by this table:

	Less than \$25,000	\$25,000-\$50,000	More than \$50,000
Less than 7 years	4.25%	3.25%	2.25%
7 years or more	4.75%	3.75%	2.75%

Specialized 7(a) Loan Programs

SBA also offers a number of specialized or targeted programs, including the LowDoc, FA\$TRACK, CAPLines, Pollution Control, DELTA, Minority and Women's Prequal, and MicroLoan programs.

The **LowDoc** and **FA\$TRACK** loans are designed to expedite the loan application process for loans under \$100,000. LowDoc loans offer a simple one-page application form (included in this section), and are usually processed within 2 to 3 days by SBA. Credit history and character are the principle factors in loan consideration. Interest rates and fees are the same as those for general 7(a) loans. FA\$TRACK is a pilot program which authorizes certain lenders to use their existing documentation and procedures to make and service a SBA guaranteed loan. There are no additional forms, and no waiting for SBA approval.

The **CAPLines** program is the umbrella for five short-term working capital loan programs:

- **Seasonal Line:** An advance against future inventory and accounts receivable help during peak seasonal fluctuations.
- **Contract Line:** Finances direct labor and material costs associated with performing assignable contract(s)
- **Builder's Line:** For small general contractor or renovator, building projects may serve as collateral for loans covering direct labor and material costs.
- **Standard and Small Asset-Based Lines:** Offer revolving credit to companies backed by short-term assets.

The maximum maturity for a CAPLine is 5 years. Interest rates are capped on such loans at 225 basis points over the prime rate, and annual servicing fees are capped at 2% (except for the standard asset based lines, which may be higher).

Pollution Control loans are intended to finance the planning, design, or installation of pollution control facilities. These facilities must prevent, reduce, abate, or control any form of pollution, and include recycling facilities. SBA will guarantee up to \$1,000,000 in principal for such loans.

The **DELTA** program is jointly sponsored by SBA and the Department of Defense. It provides loans of up to \$1.25 million for defense-dependent firms adversely affected by defense cutbacks. The loans must be used to further one of three objectives: job retention, job creation, or plant retooling/expansion.

The **Minority** and **Women's Prequalification** loan programs are pilots using intermediaries to aid minorities and women in effort to develop viable loan application packages. Such applications are then submitted directly to SBA which, if it approves the loan (usually within three days), issues a letter of Prequalification stating SBA's intent to guarantee the loan. Under both programs, SBA will generally guarantee 90% of loans up to \$250,000. (Forms for application are included in this section.)

The **MicroLoan** program offers very small loans to businesses through private not-for-profit organizations. Loans are made in amounts ranging from under \$100 to a maximum of \$25,000. The average loan size is \$10,000.



For more information, contact the SBA at:

1-800-U-ASK-SBA

Or one of the following regional offices:

Chicago Regional Office

500 W. Madison St.
Chicago, IL 60661-2511
Phone: (312) 353-5000
Fax: (312) 353-3426

Chicago District Office

500 W. Madison St.
Chicago, IL 60661-2511
Phone: (312) 353-4528
Fax: (312) 886-5688

Cincinnati Branch Office

525 Vine St.
Cincinnati, OH 45202
Phone: (513) 684-2814
Fax: (513) 684-3251

Cleveland District Office

1111 Superior Ave.
Cleveland, OH 44114-2507
Phone: (216) 522-4180
Fax: (216) 522-2038

Columbus District Office

2 Nationwide Plaza
Columbus, OH 43215-2592
Phone: (614) 469-6860
Fax: (614) 469-2391

Detroit District Office

477 Michigan Ave.
Detroit, MI 48226
Phone: (313) 226-6075
Fax: (313) 226-4769

Indianapolis District Office

429 N. Pennsylvania
Indianapolis, IN 46204-1873
Phone: (317) 226-7272
Fax: (317) 226-7259

Madison District Office

212 E. Washington Ave.
Madison, WI 53703
Phone: (608) 264-5261
Fax: (608) 264-5541

Marquette Branch Office

501 S. Front St.
Marquette, MI 49855
Phone: (906) 225-1108
Fax: (906) 225-1109

Milwaukee Branch Office

310 W. Wisconsin Ave.
Milwaukee, WI 53203
Phone: (414) 297-3941
Fax: (414) 297-1377

Minneapolis District Office

100 N. 6TH St.
Minneapolis, MN 55403
Phone: (612) 370-2324
Fax: (612) 370-2303

Springfield Branch Office

511 W. Capitol Ave.
Springfield, IL 62704
Phone: (217) 492-4416
Fax: (217) 492-4867

It is also possible to arrange SBA loans through commercial banks and other lenders. The following table lists the top three SBA lending institutions in each area State by dollar amount of SBA 7(a) loans as of June 1996.

Bank Name	Location	Amt. Loaned	# of Loans	Size (\$)
First of Amer. Bk-IL NA	Bannockburn, IL	\$276 million	14,645	1B-10B
First Midwest Bk NA	Moline, IL	\$214 million	5,208	1B-10B
Mid City NB Of Chicago	Chicago, IL	\$195 million	2,347	500M-1B
NBD Bk NA	Indianapolis, IN	\$381 million	7,499	1B-10B
1st Source Bk	South Bend, IN	\$208 million	3,704	1B-10B
National City Bk IN	Indianapolis, IN	\$192 million	4,197	1B-10B
Norwest Bk IA NA	Des Moines, IA	\$210 million	7,124	1B-10B
Firststar Bk IA NA	Des Moines, IA	\$194 million	8,268	1B- 10B
Brenton Bk	Des Moines, IA	\$75 million	2,300	1B-10B
NBD BK	Detroit, MI	\$694 million	9,989	> 10B
First of Amer. Bk-MI NA	Grand Rapids, MI	\$660 million	36,168	> 10B
Comerica Bk	Detroit, MI	\$635 million	15,937	> 10B
Norwest Bk MN NA	Minneapolis, MN	\$530 million	9,744	> 10B
First Bk NA	Minneapolis, MN	\$411 million	12,462	> 10B
Norwest Bk MN South NA	Rochester, MN	\$163 million	5,773	1B- 10B
Magna Bk NA	Saint Louis, MO	\$384 million	12,344	1B- 10B
Boatmens NB of St. Louis	Saint Louis, MO	\$215 million	5,933	> 10B
Commerce Bk NA	Kansas City, MO	\$186 million	8,010	1B- 10B
Keybank Nat. Assn.	Cleveland, OH	\$1.7 billion	20,641	> 10B
Huntington NB	Columbus, OH	\$610 million	18,101	> 10B
Star Bk NA	Cincinnati, OH	\$372 million	8,252	1B- 10B
Firststar Bk WI	Madison, WI	\$4101 million	12,671	1B- 10B
Firststar Bk Milwaukee NA	Milwaukee, WI	\$186 million	10,395	1B- 10B
M&I Madison Bk	Madison, WI	\$137 million	2,611	1B- 10B

Directory of Certified and Preferred Banks by State

** Indicates PLP Participant*

Illinois

Addison	Oxford Bank and Trust
Aurora	*Merchants Bank of Aurora
Aurora	*Old 2nd Nat. Bank of Aurora
Belleville	Magna Bank of Illinois
Bellwood	The Bank of Bellwood
Blue Island	1st Nat. Bank of Blue Island
Chicago	Albany Bank and Trust Co.
Chicago	American Nat. Bank & Trust
Chicago	*First Nat. Bank of Chicago
Chicago	*Foster Bank
Chicago	*Harris Trust & Savings Bank
Chicago	The Money Store
Chicago	*Pioneer Bank and Trust Co.
Chicago	*South Central Bank & Trust
Chicago	*South Shore Bank of Chicago
Decatur	Soy Capital Bank & Trust Co.
Danville	Palmer American Nat. Bank
Evergreen Pk.	ITT Small Bus. Finance Corp.
Elgin	*Union National Bank & Trust
Fairview Hts.	*Central Bank
Fairview Hts.	*Colonial Bank
Fairview Hts.	*Elliott State Bank
Fairview Hts.	*Farmers & Merchants Nat. Bank
Fairview Hts.	*First Nat. Bank of Central IL
Fairview Hts.	*First Trust and Savings Bank
Homewood	Bank of Homewood
La Grange	Bank One, Chicago
Lincoln	*State Bank of Lincoln
Maywood	Maywood-Proviso State Bank
Morton Gr.	Comerica Bank - Illinois
Naperville	1st Colonial Bank of DuPage Co.
Naperville	Firststar Bank West, NA
Norridge	Plaza Bank Norridge
O'Fallon	First Bank of Illinois
Park Ridge	First State Bank of Park Ridge
Park Ridge	NBD Park Ridge Bank
Pekin	*First State Bank of Pekin
Rockford	Bank One, Rockford
Roselle	Harris Bank Roselle
Springfield	*First of America Bank-IL
Springfield	Bank One, Springfield
Urbana	*Busey First National Bank
Urbana	Central Illinois Bank
W. Frankfort	*Banterra Bank of W. Frankfort

*** Indicates National PLP Participant*

Indiana

Covington	Bank of Western Indiana
Evansville	Citizens National Bank
Fort Wayne	Fort Wayne National Bank
Fort Wayne	NBD Summit Bank
Indianapolis	Bank One Indianapolis
Indianapolis	Busey Bank
Indianapolis	ITT Small Bus. Finance Corp.
Indianapolis	The Money Store
Indianapolis	National City Bank
Indianapolis	NBD Bank, Indiana
LaPorte	First Citizens Bank, NA
Noblesville	*Huntington National Bank
South Bend	1st Source of Bank South Bend
South Bend	Society National Bank
Whiting	Centier Bank

Iowa

Cedar Rapids	Farmers & Merchants Savings
Cedar Rapids	*Firststar Bank Cedar Rapids
Cedar Rapids	First National Bank
Cedar Rapids	*Norwest Bank Iowa, N.A.
Davenport	*Norwest Bank Iowa, N.A.
DeWitt	First Central State Bank
Dubuque	*Dubuque Bank and Trust Co.
Iowa City	Iowa State Bank and Trust Co.
Jessup	Farmers State Bank
Maquoketa	Maquoketa State Bank
Manchester	Farmers & Merchants Savings
Marion	Farmers State Bank
Waterloo	Homeland Bank, N.A.

Michigan

Bay City	*Chemical Bank - Bay Area
Detroit	Comerica Bank
Flint	Citizens Com. & Savings Bank
Grand Rapids	*Old Kent Bank
Grand Rapids	*United Bank of Michigan
Kalamazoo	First of America Bank-MI, N.A.
Kalamazoo	Old Kent Bank - Southwest
Lansing	*Michigan National Bank
Midland	*Chemical Bank-Midland
Owosso	*Chemical Bank-Key State
Traverse City	*Empire National Bank
Traverse City	Old Kent Bank -Traverse City
Troy	NBD Bank, NA

Missouri

Wichita	Emergent Business Capital, Inc.
Brentwood	Magna Bank of Missouri
Carthage	*Boatman's Bank of SW MO
Clayton	The Money Store
Columbia	Capital Bank of Columbia
Columbia	*Union Planters Bank of Mid-MO
Independence	Standard Bank and Trust Co.
Jefferson City	Exchange National Bank
Jefferson City	*The Central Trust Bank
Joplin	Mercantile Bank and Trust Co.
Kansas City	*Bannister Bank & Trust
Kansas City	Boatmen's First National Bank
Kansas City	*Country Club Bank
Kansas City	*First Nat. Bank of Platte Co.
Kansas City	United Missouri Bank
Springfield	*Boatmen's National Bank
Springfield	*Citizens National Bank
Springfield	*Commerce Bank of Springfield
Springfield	First City National Bank
Springfield	Mercantile Bank of Springfield
St. Louis	Emergent Business Capital, Inc.
St. Louis	Boatmen's National Bank
St. Louis	*G.E. Capital Financing Corp.
St. Louis	ITT Small Bus. Finance Corp.
St. Louis	*Mercantile Bank, St. Louis
St. Louis	United Missouri Bank
Stockton	*Sac River Valley Bank
Washington	Bank of Washington

Ohio

Akron	Bank One, Akron, NA
Akron	First National Bank of Akron
Beachwood	Republic Savings Bank
Bedford Hts.	Bank One, Cleveland
Cincinnati	North Side Bank and Trust Co.
Cincinnati	PNC Bank, Cincinnati
Cleveland	*American National Bank
Cleveland	Society National Bank
Columbus	*Bank One, Columbus, N.A.
Columbus	*The Huntington National Bank
Columbus	National City Bank of Columbus
Columbus	Society Bank
Dayton	Bank One, Dayton, N.A.
Dayton	*National City Bank
Dayton	Society Bank - Dayton area
Dublin	The Money Store Investment Co.
Elyria	Elyria Savings & Trust Nat. Bank
Elyria	Premier Bank and Trust
Lorain	*Lorain National Bank
Newark	The Park National Bank
Piqua	Fifth Third Bank of Western OH
Salineville	The Citizens Banking Company
Toledo	*Mid American National Bank
Toledo	National City Bank, Northwest
Toledo	The Fifth Third Bank of NW OH
Youngstown	Second National Bank of Warren
Zanesville	*First Nat. Bank of Zanesville

Wisconsin

Appleton	American Nat. Bank - Fox Cities
Appleton	F & M Bank - Appleton
Appleton	M&I Fox Valley
Brookfield	The Money Store
Eau Claire	M&I Community State Bank
Fond du Lac	Nat. Exchange Bank and Trust
Grafton	Grafton State Bank
Green Bay	*Associated Bank Green Bay
Green Bay	M&I Bank Northeast
Green Bay	Norwest Bank
Madison	Associated Bank Madison
Madison	*Firststar Bank Wisconsin
Manitowoc	Associated Bank Lakeshore
Manitowoc	1st National Bank in Manitowoc
Milwaukee	*Associated Bank
Milwaukee	*Bank One, Wisconsin
Milwaukee	First Bank, Milwaukee
Milwaukee	*Firststar Bank Milwaukee, N.A.
Milwaukee	M&I Marshall & Ilsley Bank
Milwaukee	Park Bank
Neenah	*Associated Bank, N.A.
Sheboygan	Community Bank
Stevens Point	M&I Mid-State Bank
Sturgeon Bay	Baylake Bank
Wausau	*M&I First American Nat. Bank

Minnesota

Edina	First Bank National Association
Hopkins	*First Bank, N.A.
Minneapolis	*Norwest Bank, Minnesota, NA
Minneapolis	Riverside Bank
Morris	Morris State Bank
Pipestone	First National Bank of Pipestone
St. Anthony	*Firststar Bank of Minnesota, NA
St. Cloud	*First American Bank, NA
St. Cloud	Zapp Bank
St. Paul	*First American Bank Metro
St. Paul	*First Amer. Bank Southwest
St. Paul	*First American Bank West
St. Paul	*First Amer. Bank of Alexandria
St. Paul	*First Amer. Bank of Brainerd
St. Paul	*1st Amer. Bank of Breckenridge
St. Paul	*First Amer. Bank of Detroit Lks.
St. Paul	*First Amer. Bank of Intl. Falls
St. Paul	*First Amer. Bank of Willmar
West St. Paul	*Signal Bank, Inc.
Willmar	*Heritage Bank
Young Amer.	*State Bank of Young America

National

Chicago, IL	**The Money Store Investment Corp.
Sacramento, CA	**The Money Store Investment Corp.
Morristown, NJ	**AT&T Small Lending Corp.
Dallas, TX	**First Western SBLC, Inc.

Corporate Name (If any)

Trade Name & Street Address _____ Corporate Structure: Proprietorship ___ Partnership ___ Corp. ___ LLC ___

City _____ County _____ State _____ Zip _____ Phone (____) _____ TaxID# _____

Mailing Address (if different) _____

Type of Business _____ Date Established _____ Time as Owner _____ No. of Employees: _____

MANAGEMENT (Proprietor, partners, officers, directors owning 20% or more of the company)--Must account for 100% of the business

Name	Address	City	State	Zip	
Social Security #	*Veteran	*Gender	*Race	US Citizen	Alien Reg. #
Name	Address	City	State	Zip	
Social Security #	*Veteran	*Gender	*Race	US Citizen	Alien Reg. #

*This data is collected for statistical purposes only. It has no bearing on the credit decision to approve or decline this application. Disclosure is voluntary.

Are any of the above individuals (a) presently under indictment, on parole or probation or have they ever been (b) charged for any criminal offense other than a minor vehicle violation, or (c) convicted, placed on pretrial diversion, or placed on any form of probation including adjudication withheld pending probation for any criminal offense other than a minor vehicle violation?
Yes ___ No ___ If yes, loan request must be submitted under regular 7(a) loan program.

Have you employed anyone to prepare this application? Yes ___ No ___ If yes, how much have you paid? \$ _____ How much do you owe? \$ _____

Have you or any officer of your company ever been involved in bankruptcy or insolvency proceedings? Yes ___ No ___ If yes, provide details to bank.

Are you or your business involved in any pending lawsuits? Yes ___ No ___ If yes, provide details to bank.

DESCRIBE YOUR BUSINESS OPERATION:

IS BUSINESS ENGAGED IN EXPORT TRADE? Yes ___ No ___ DO YOU INTEND TO BEGIN EXPORTING AS A RESULT OF THIS LOAN? Yes ___ No ___

SUMMARY OF MANAGEMENT'S BUSINESS EXPERIENCE, EDUCATION, AND TRAINING:

LOAN REQUEST: HOW MUCH, FOR WHAT, WHY IT IS NEEDED

INDEBTEDNESS: Furnish information on ALL BUSINESS debts, contracts, notes, and mortgages payable. Indicate by an (*) items to be paid with loan proceeds.

To Whom Payable	Original Amount	Original Date	Present Balance	Rate of Interest	Maturity Date	Monthly Payment	Collateral	Current or Past Due
	\$		\$			\$		
	\$		\$			\$		
	\$		\$			\$		
	\$		\$			\$		

PREVIOUS SBA OR OTHER GOVERNMENT FINANCING : If you or any principals or affiliates have ever requested Government Financing complete the following:

Name of Agency	Loan Number	Date Approved	\$ Amount	Loan Balance	Status

If you knowingly make a false statement or overvalue a security to obtain a guaranteed loan from SBA you can be fined up to \$10,000 or imprisoned for not more than five years or both under 18 USC 1001.

I hereby certify that all information contained in this document and any attachments is true and correct to the best of my knowledge.

If applicant is a proprietor or general partner, sign here: By: _____ Title _____ Date _____

If corporation sign below: Corporate Name _____

By: _____ Date: _____ Attested By: _____
Signature of President Signature of Corporate Secretary

FOR BANK USE ONLY

LENDER'S APPLICATION FOR GUARANTY

Name of Lender

Address

Telephone(A/C)

Fax #
Date of Guaranty Agreement (SBA Form 750)

Applicant's Trade Name

We request SBA to guarantee ____% of a loan in the amount of \$_____ for ____ years, with monthly (P&I payments of \$_____/ principal payments of \$_____ plus interest) beginning ____ month(s) from date of note. (If applicable: Interest only payment to begin ____ months from date of note).
The interest rate is to be fixed at ____% OR variable with a base rate of ____%, spread ____%, and an adjustment period of _____.

Lender's Experience with Applicant and Assessment of Management's Character and Capability:

CREDIT REPORTS (CR): CR Company _____ Risk Score _____ SIC Code _____ Summary of Business Credit:

OWNERS, GUARANTORS, AND CO-SIGNERS:

Owners of 20% or more of business must guarantee the note. Lender must obtain personal credit reports on all owners, guarantors, and co-signers.

Name (Indicate co-signers with *)

Address

Individual Credit Reports Analysis

Personal F/S: Lender should obtain signed personal financial statements for all owners, guarantors, and co-signers.Do owners' personal unpledged liquid assets exceed \$50,000 (not including IRA, CV Life Insurance, or savings for education)? Yes ____ No ____
Comments on personal resources, including any supplementary or outside sources of income available for debt service or to secure loan:

P&L: Average annual gross sales, including all affiliates, for the last 3 years (if applicable) \$_____
Year end cash flow last 3 years (if applicable) FY ____, \$_____, FY ____, \$_____, FY ____, \$_____
One year projected cash flow after owner's compensation \$_____ Total annual debt service (including interest) after the loan \$_____
Comments on repayment ability:

Pro Forma Balance Sheet: Debt/NW Ratio _____ Current Ratio (CA/CL) _____ Comments on balance sheet:

IF NEW BUSINESS OR FOR PURCHASE OF EXISTING BUSINESS, AMOUNT OF APPLICANT INJECTION - CASH \$ OTHER \$

Lender's Analysis of Risk (If there are affiliates, submit analysis of financial condition of affiliate and potential impact on applicant business. Affiliates include all businesses owned by applicant or spouse of applicant, even though not in a related business. Comment on bankruptcies and pending lawsuits. Include lien position on collateral.)

Collateral Market Value *

Inventory	\$ _____
Equipment	\$ _____
A/R	\$ _____
R/E **	\$ _____
_____	\$ _____
_____	\$ _____

* Value determined by:

Lender ____ Appraisal ____

Other (specify) _____

** Furnish Legal Description or
Property Address & Lien Data

Use of Proceeds:

Inventory	\$ _____
Fixed Assets	\$ _____
Real Estate	\$ _____
Note Payment	\$ _____
Working Capital	\$ _____
SBA Payoff	\$ _____

_____	\$ _____
_____	\$ _____
_____	\$ _____

TOTAL \$ _____

For loans over \$50,000 and up to \$100,000, the following must be submitted:

1. Lender's internal loan report, including cash flow analysis and pro forma balance sheet
2. Income tax schedule C or front page of corporate returns for past 3 years (if applicable)
3. Personal F/S's for all guarantors

IF LOAN IS TO PURCHASE AN EXISTING BUSINESS

Include copy of terms of sale and F/S on the existing business. Also, comment on any benefit to the business as a result of the change of ownership. Are buyer & seller related? Yes ____ No ____ State relationship _____

I submit this application to SBA for approval subject to the terms and conditions outlined above. Without the participation of SBA to the extent applied for we would not be willing to make this loan, and in our opinion the financial assistance applied for is not otherwise available on reasonable terms. I certify that none of the Lender's employees, officers, director or substantial stockholders (more than 10%) have a financial interest in the applicant.

Signature of Lender Official:

Title

Date

SBA PRE-QUALIFICATION LOAN APPLICATION

SBA OFFICE USE ONLY: DATE RECEIVED:

CID NUMBER:

Legal Name of Business:				Tax ID #:			
Address of Business:							
Business Phone #:				Date Business Established:			
Legal Structure: <u> </u> Proprietorship <u> </u> Partnership <u> </u> Corporation							
Standard Industrial Classification #:				Numbers of Existing Employees:			
Describe History of Business: (If NEW business, submit copy of Business Plan)							
Describe Business Operations:							
Is Business engaged in export trade? Yes <u> </u> No <u> </u> Do you intend to begin exporting as result of this loan? Yes <u> </u> No <u> </u>							
OWNERS/MANAGEMENT (proprietors, partners and shareholder) *							
Name	SS No.	% Owned	Sex	Military Service Y/N: From: To:			Race
TOTAL		100.0%					

* Personal financial statements must be submitted by all owners of 20% or more.

- a. Do any above individuals or groups of above individuals who hold ownership or management control of the applicant firm also have ownership or management control of any other business operations? Yes* No
 *If yes, please list each entity: _____

- b. Do any of the above individuals have personal unpledged liquid assets in excess of \$50,000 or 25% of the requested loan amount (whichever is greater)(excluding IRA's, CV Life Insurance, savings for education)? Yes* No
 *If yes, list each individual: _____

- c. Are any of the above individuals (a) presently under indictment, on parole or probation or (b) have they ever been charged with or arrested or convicted of any criminal offense other than a vehicle violation? Yes* No
 *If yes, the loan request must be submitted under the regular 7(a) loan program.
- d. Have any above individuals, the applicant firm or affiliates (a) been involved in bankruptcy or insolvency proceedings or (b) have pending personal or business judgements, unsettled lawsuits or major disputes? Yes* No
 *If yes, the loan request must be submitted under the 7(a) regular loan program.
- e. Do you or any member of your household, or anyone who owns, manages, or directs your business or members of their households work for the Small Business Administration, Small Business Advisory Council, SCORE or ACE, any Federal Agency, or the participating lender? Yes* No
 *If yes, the loan request must be submitted under the 7 (a) regular loan program.
- f. U.S. Citizen? Yes No*
 *If no, include a copy of Alien Registration Card (Form I 151 or 551). Alien Registration #: _____

PREVIOUS SBA OR OTHER GOVERNMENT FINANCING (Requested or obtained by principals, applicant firm or affiliates)					
Name of Agency	Declined or Approved	Date of Request	\$ Amount	Loan Balance	Current or Past Due
			\$	\$	
			\$	\$	
			\$	\$	

CREDIT HISTORY			
Credit Reports Obtained For:	Type of Report	Credit Rating	Comments:
Applicant			
Principal:			
Principal:			
Principal:			
Other:			

PROPOSED USES AND SOURCES OF FUNDS			
USES		SOURCES	
Working Capital	\$	SBA/Bank (requested loan amount)	\$
Inventory	\$	Equity/Injection ⁴	\$
Machinery & Equipment	\$		
Furniture & Fixtures	\$	Seller Financing	\$
Real Estate ¹ (purchase, construction, etc.)	\$	Other:	\$
Purchase an Existing Business ²	\$	Other:	\$
Debt Refinance ³ (incl. in listing, below)	\$	Other:	\$
TOTAL USES:	\$	TOTAL SOURCES:	\$
Proposed SBA/Bank Maturity		Proposed SBA/Bank Interest Rate	

- 1

If financing Real Estate, who or what entity will hold title: _____

If other than the applicant firm, list ownership of real estate: _____
- 2

Purchase price = \$ _____; Stock or asset purchase: _____; Why is seller selling?: _____
- 3

If refinancing debts, state benefit to applicant firm: _____
4.

State the source of the injection: _____

BUSINESS INDEBTEDNESS: on all existing business debts, contracts, notes and mortgages payable. (Indicate by an (*) items to be paid w/ loan proceeds.)								
To Whom Payable	Original Amount	Original Date	Present Balance	Rate of Interest	Maturity Date	Monthly Payment	Secured by	Current or Past Due
	\$		\$			\$		
	\$		\$			\$		
	\$		\$			\$		
	\$		\$			\$		
	\$		\$			\$		
Total			\$		Total	\$		

Financial statements are: Internal Acc't. Compiled Reviewed Audited

BALANCE SHEET INFORMATION: (Dollars in Thousands)		Last FYE Date: _____	Interim Date: _____	Debit	Credit	Proforma
ASSETS:						
	Cash	\$ _____	\$ _____			\$ _____
	Accounts Rec.	\$ _____	\$ _____			\$ _____
	Inventory	\$ _____	\$ _____			\$ _____
	Other	\$ _____	\$ _____			\$ _____
TOTAL CURRENT ASSETS		\$ _____	\$ _____			\$ _____
FIXED ASSETS		\$ _____	\$ _____			\$ _____
OTHER ASSETS		\$ _____	\$ _____			\$ _____
TOTAL ASSETS		\$ _____	\$ _____			\$ _____
LIABILITIES & NET WORTH:						
	Accounts Payable	\$ _____	\$ _____			\$ _____
	Notes Payable	\$ _____	\$ _____			\$ _____
	Taxes	\$ _____	\$ _____			\$ _____
	Other	\$ _____	\$ _____			\$ _____
	SBA	\$ _____	\$ _____			\$ _____
TOTAL CURRENT LIABILITIES:						
	Notes Payable	\$ _____	\$ _____			\$ _____
	SBA	\$ _____	\$ _____			\$ _____
	Other					
TOTAL LIABILITIES		\$ _____	\$ _____			\$ _____
NET WORTH		\$ _____	\$ _____			\$ _____
TOTAL LIABILITIES AND NET WORTH		\$ _____	\$ _____			\$ _____

PROFORMA RATIO INFORMATION:	Applicant	RMA
Proforma Working Capital	\$ _____	XXXXXXXXXXXX
Proforma Current Ratio		
Proforma Quick Ratio		
Accounts Receivable Turnover (in days)		
Inventory Turnover (in days)		
Proforma Debt to Worth Ratio		

HISTORICAL & PROJECTED CASHFLOW FOR REPAYMENT INFORMATION							
	(Dollars in Thousands)	Prior Fiscal Year 19 _____	Prior Fiscal Year 19 _____	Most Recent Fiscal Year 19 _____	Interim mos. _____	RMA	Projection
a	Revenues	\$ _____ 100%	\$ _____ 100%	\$ _____ 100%	\$ _____ 100%	100%	\$ _____ 100%
b	Gross Profit	\$ _____ %	\$ _____ %	\$ _____ %	\$ _____ %		\$ _____ %
c	Interest Expense	\$ _____ %	\$ _____ %	\$ _____ %	\$ _____ %		\$ _____ %
d	Owner Withdraw	\$ _____ %	\$ _____ %	\$ _____ %	\$ _____ %		\$ _____ %
e	Net Income (Aftr w/d, dvds, txs)	\$ _____ %	\$ _____ %	\$ _____ %	\$ _____ %		\$ _____ %
f	Depreciation	\$ _____ %	\$ _____ %	\$ _____ %	\$ _____ %		\$ _____ %
g	Cash Flow (c+e+f)	\$ _____	\$ _____	\$ _____	\$ _____	XXX	\$ _____
h	Rent Expense Saved (if applicable)	\$ _____	\$ _____	\$ _____	\$ _____	XXX	\$ _____
i	Other Expense Saved (explain)	\$ _____	\$ _____	\$ _____	\$ _____	XXX	\$ _____
j	Cashflow for Debt Service (g+h+i)	\$ _____	\$ _____	\$ _____	\$ _____	XXX	\$ _____
k	Existing Debt Service (Prin.& Int.)	\$ _____	\$ _____	\$ _____	\$ _____	XXX	\$ _____
l	New Debt Service (Prin. & Int.)	\$ _____	\$ _____	\$ _____	\$ _____	XXX	\$ _____
m	Total Debt Service (k+l)	\$ _____	\$ _____	\$ _____	\$ _____	XXX	\$ _____
n	Debt Coverage Ratio (j÷m)					XXX	

Combined Household Income:\$ _____ Number in Household:_____

Other Sources of Income:\$ _____ Withdrawals:\$ _____

COLLATERAL SUMMARY	Cost	Market Value	Prior liens
Land and Buildings			
Machinery & Equipment			
Furniture and Fixtures			
Accounts Receivable			
Inventory			
Other:			
TOTAL			
Evaluation by:		Date:	
Total Cost or Appraised Value		XXXXXX	
Less: Prior Liens		XXXXXX	
= Net Collateral Value		XXXXXX	
COVERAGE RATIO: (net collateral value ÷ loan amount)		XXXXXX	

Is firm considered a frequently polluting industry? _____ Yes* _____ No
 *If yes, Phase I must be completed and submitted in the private sector lender's loan package.

OTHER PERTINENT INFORMATION:
MANAGEMENT EXPERIENCE/BACKGROUND (Describe key management/owner's education & business experience)

CERTIFICATIONS OF APPLICANT AND NON-PROFIT INTERMEDIARY

I hereby certify that all information contained in this document and attachments is true and correct to the best of my knowledge. If you knowingly make a false statement or overvalue a security to obtain a guaranteed loan from SBA you can be fined up to \$10,000 or imprisoned for not more than five years or both under 18 USC 1001.

IF A PROPRIETOR OR GENERAL PARTNER, SIGN HERE:

By: _____ Title: _____ Date: _____
 Address: _____

IF A CORPORATION, SIGN HERE:

Corporate Name: _____
 By: _____ Title: _____ Date: _____
 Attested by: _____
 Signature of Corporate Secretary

NON-PROFIT INTERMEDIARY: _____

By: _____ Title: _____ Date: _____

SBA PRE-QUALIFICATION LOAN APPLICATION

SBA OFFICE USE ONLY: DATE RECEIVED:

CID NUMBER:

Legal Name of Business:				Tax ID #:			
Address of Business:							
Business Phone #:				Date Business Established:			
Legal Structure: <input type="checkbox"/> Proprietorship <input type="checkbox"/> Partnership <input type="checkbox"/> Corporation							
Standard Industrial Classification #:				Numbers of Existing Employees:			
Describe History of Business: (If NEW business, submit copy of Business Plan)							
Describe Business Operations:							
Is Business engaged in export trade? Yes <input type="checkbox"/> No <input type="checkbox"/> Do you intend to begin exporting as result of this loan? Yes <input type="checkbox"/> No <input type="checkbox"/>							
OWNERS/MANAGEMENT (proprietors, partners and shareholder) *							
Name	SS No.	% Owned	Sex	Military Service Y/N: From: To:			Race
TOTAL		100.0%					

* Personal financial statements must be submitted by all owners of 20% or more.

- a. Do any above individuals or groups of above individuals who hold ownership or management control of the applicant firm also have ownership or management control of any other business operations?
 _____ Yes* _____ No
 *If yes, please list each entity: _____

- b. Do any of the above individuals have personal unpledged liquid assets in excess of \$50,000 or 25% of the requested loan amount (whichever is greater)(excluding IRA's, CV Life Insurance, savings for education)?
 _____ Yes* _____ No
 *If yes, list each individual: _____

- c. Are any of the above individuals (a) presently under indictment, on parole or probation or (b) have they ever been charged with or arrested or convicted of any criminal offense other than a vehicle violation?
 _____ Yes* _____ No
 *If yes, the loan request must be submitted under the regular 7(a) loan program.

- d. Have any above individuals, the applicant firm or affiliates (a) been involved in bankruptcy or insolvency proceedings or (b) have pending personal or business judgements, unsettled lawsuits or major disputes?
 _____ Yes* _____ No
 *If yes, the loan request must be submitted under the 7(a) regular loan program.

- e. Do you or any member of your household, or anyone who owns, manages, or directs your business or members of their households work for the Small Business Administration, Small Business Advisory Council, SCORE or ACE, any Federal Agency, or the participating lender? _____ Yes* _____ No
 *If yes, the loan request must be submitted under the 7 (a) regular loan program.

f. U.S. Citizen? ☐Yes ☐No*
*If no, include a copy of Alien Registration Card (Form I 151 or 551). Alien Registration #: _____

PREVIOUS SBA OR OTHER GOVERNMENT FINANCING
(Requested or obtained by principals, applicant firm or affiliates)

Name of Agency	Declined or Approved	Date of Request	\$ Amount	Loan Balance	Current or Past Due
			\$	\$	
			\$	\$	
			\$	\$	

CREDIT HISTORY

Credit Reports Obtained For:	Type of Report	Credit Rating	Comments:
Applicant			
Principal:			
Principal:			
Principal:			
Other:			

PROPOSED USES AND SOURCES OF FUNDS

USES		SOURCES	
Working Capital	\$	SBA/Bank (requested loan amount)	\$
Inventory	\$	Equity/Injection ⁴	\$
Machinery & Equipment	\$		
Furniture & Fixtures	\$	Seller Financing	\$
Real Estate ¹ (purchase, construction, etc.)	\$	Other:	\$
Purchase an Existing Business ²	\$	Other:	\$
Debt Refinance ³ (incl. in listing, below)	\$	Other:	\$
TOTAL USES:	\$	TOTAL SOURCES:	\$
Proposed SBA/Bank Maturity		Proposed SBA/Bank Interest Rate	

1 If financing Real Estate, who or what entity will hold title: _____

If other than the applicant firm, list ownership of real estate: _____

2 Purchase price = \$ _____; Stock or asset purchase: _____

3 If refinancing debts, state benefit to applicant firm: _____

4. State the source of the injection: _____

BUSINESS INDEBTEDNESS: on all existing business debts, contracts, notes and mortgages payable.
(Indicate by an (*) items to be paid w/ loan proceeds.)

To Whom Payable	Original Amount	Original Date	Present Balance	Rate of Interest	Maturity Date	Monthly Payment	Secured by	Current or Past Due
	\$		\$			\$		
	\$		\$			\$		
	\$		\$			\$		
	\$		\$			\$		
	\$		\$			\$		
Total			\$		Total		\$	

Financial statements are: Internal Acc't. Compiled Reviewed Audited

BALANCE SHEET INFORMATION: (Dollars in Thousands)		Last FYE Date: __	Interim Date: __	Debit	Credit	Proforma	
ASSETS:							
	Cash	\$	\$			\$	
	Accounts Rec.	\$	\$			\$	
	Inventory	\$	\$			\$	
	Other	\$	\$			\$	
TOTAL CURRENT ASSETS		\$	\$			\$	
FIXED ASSETS		\$	\$			\$	
OTHER ASSETS		\$	\$			\$	
TOTAL ASSETS		\$	\$			\$	
LIABILITIES & NET WORTH:							
	Accounts Payable	\$	\$			\$	
	Notes Payable	\$	\$			\$	
	Taxes	\$	\$			\$	
	Other	\$	\$			\$	
	SBA	\$	\$			\$	
TOTAL CURRENT LIABILITIES:							
	Notes Payable	\$	\$			\$	
	SBA	\$	\$			\$	
	Other						
TOTAL LIABILITIES		\$	\$			\$	
NET WORTH		\$	\$			\$	
TOTAL LIABILITIES AND NET WORTH		\$	\$			\$	
PROFORMA RATIO INFORMATION:		Applicant		RMA			
Proforma Working Capital		\$		XXXXXXXXXXXX			
Proforma Current Ratio							
Proforma Quick Ratio							
Accounts Receivable Turnover (in days)							
Inventory Turnover (in days)							
Proforma Debt to Worth Ratio							
HISTORICAL & PROJECTED CASHFLOW FOR REPAYMENT INFORMATION							
	(Dollars in Thousands)	Prior Fiscal Year 19__	Prior Fiscal Year 19__	Most Recent Fiscal Year 19__	Interim mos.	RMA	Projection
a	Revenues	\$ 100%	\$ 100%	\$ 100%	\$ 100%	100%	\$ 100%
b	Gross Profit	\$ ____%	\$ ____%	\$ ____%	\$ ____%		\$ ____%
c	Interest Expense	\$ ____%	\$ ____%	\$ ____%	\$ ____%		\$ ____%
d	Owner Withdraw	\$ ____%	\$ ____%	\$ ____%	\$ ____%		\$ ____%
e	Net Income (Aft'r w/d, dvds, txs)	\$ ____%	\$ ____%	\$ ____%	\$ ____%		\$ ____%
f	Depreciation	\$ ____%	\$ ____%	\$ ____%	\$ ____%		\$ ____%
g	Cash Flow (c+e+f)	\$	\$	\$	\$	XXX	\$
h	Rent Expense Saved (if applicable)	\$	\$	\$	\$	XXX	\$
i	Other Expense Saved (explain)	\$	\$	\$	\$	XXX	\$
i	Cashflow for Debt Service (g+h+i)	\$	\$	\$	\$	XXX	\$
k	Existing Debt Service (Prin. & Int.)	\$	\$	\$	\$	XXX	\$
l	New Debt Service (Prin. & Int.)	\$	\$	\$	\$	XXX	\$
m	Total Debt Service (k+l)	\$	\$	\$	\$	XXX	\$
n	Debt Coverage Ratio (i÷m)					XXX	

Combined Household Income:\$ _____ Number in Household: _____
 Other Sources of Income:\$ _____ Withdrawals:\$ _____

COLLATERAL SUMMARY	Cost	Market Value	Prior liens
Land and Buildings			
Machinery & Equipment			
Furniture and Fixtures			
Accounts Receivable			
Inventory			
Other:			
TOTAL			
Evaluation by:		Date:	
Total Cost or Appraised Value		XXXXXX	
Less: Prior Liens		XXXXXX	
= Net Collateral Value		XXXXXX	
COVERAGE RATIO: (net collateral value ÷ loan amount)		XXXXXX	

Is firm considered a frequently polluting industry? _____ Yes* _____ No

*If yes, Phase I must be completed and submitted in the private sector lender's loan package.

OTHER PERTINENT INFORMATION:
MANAGEMENT EXPERIENCE/BACKGROUND (Describe key management/owner's education & business experience)

CERTIFICATIONS OF APPLICANT AND INTERMEDIARY

I hereby certify that all information contained in this document and attachments is true and correct to the best of my knowledge. If you knowingly make a false statement or overvalue a security to obtain a guaranteed loan from SBA you can be fined up to \$10,000 or imprisoned for not more than five years or both under 18 USC 1001.

IF A PROPRIETOR OR GENERAL PARTNER, SIGN HERE:

By: _____ Title: _____ Date: _____

 Address: _____

IF A CORPORATION, SIGN HERE:

Corporate Name: _____
 By: _____ Title: _____ Date: _____

 Attested by: _____
 Signature of Corporate Secretary

INTERMEDIARY: _____

By: _____

Title: _____

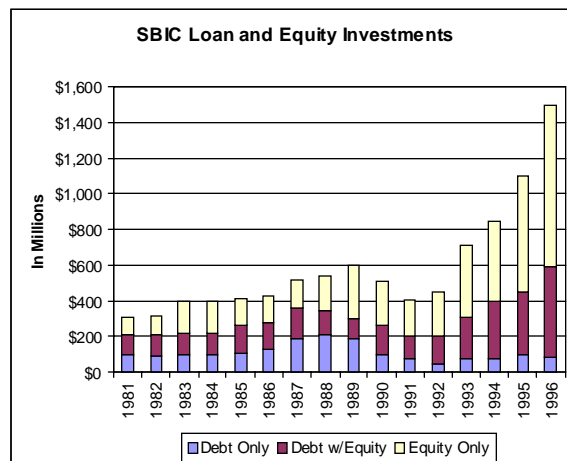
Date: _____

Small Business Investment Companies

OBJECTIVE:	To provide equity capital, long-term loans, and management assistance to eligible small businesses
ELIGIBILITY:	Small, independently-owned businesses that are not dominant in their fields
COST:	Variable, depending on the policies of the individual SBIC and the situation of the small businesses receiving financing
SERVICES:	Financial assistance in the form of direct loans, guaranteed loans and equity investment, sometimes coupled with advisory services.

Small Business Investment Company Program

The **Small Business Investment Company (SBIC)** program helps independent small businesses gain access to long-term financing and venture capital resources needed to maintain and expand their operations. SBICs are privately held investment firms licensed and regulated by the Small Business Administration (SBA). SBA supports authorized SBICs with Government-backed funds, which in turn are invested in small enterprises. SBICs are controlled by their owners and managers, who make all decisions according to their own policies with regard to investment strategy, size of financing provided, industry preference, and their favored region of activity.



SBICs seek to fill a gap in available financing for small businesses, serving as financier in one of three ways by:

- making direct long-term loans of up to 20 years (independently or in conjunction with other lenders) for working capital and equipment; facility expansion or renovation; product development; or marketing strategy implementation and related activities;
- lending money in exchange for the company's debt securities, which may be convertible into an equity position in the business;
- providing capital through the purchase of company stock or some other type of equity interest.

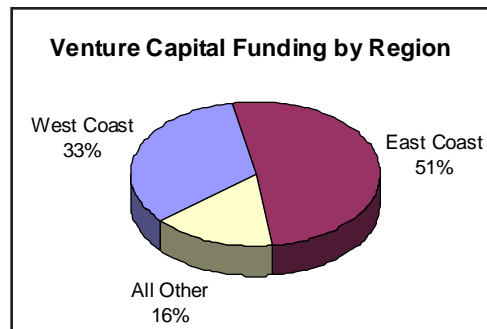
While many venture capital firms may only make investments of several million dollars and up, SBICs concentrate their lending efforts on smaller investments. Studies have shown that every dollar lent by a SBIC to a client firm attracts an average of two dollars from other lenders. Small operations can derive other benefits from a relationship with a SBIC, as the SBA requires all investment companies to provide management expertise and a broad range of business advice that can help insure the success of SBIC clients. SBICs are prohibited from taking control of businesses they help finance.

Specialized Small Business Investment Companies (SSBICs)

SSBICs invest only in companies that are owned by persons who are economically or socially disadvantaged. Generally, the same rules and operating procedures apply, although in return for their specialized focus, SSBICs are offered unique incentives in the form of preferred stock and debentures subsidized by the SBA.

ACE-Net

While SBICs have developed throughout the country, venture capital availability has become largely concentrated on the coasts, leaving the South and Midwest with relatively little coverage (see chart). Many companies have also found that it remains difficult to find funding of less than \$1 million and more than \$250,000. ACE-Net is being developed to provide small companies outside of the geographic scope of many investment companies a method for obtaining equity partners in this funding range. SBA estimates that there are about 250,000 individuals who qualify to use the ACE-Net, and that they currently invest approximately \$20 billion annually across over 30,000 ventures. By listing with the network, companies allow executive summaries of their proposals to be reviewed by such investors.



ACE-Net provides an Internet-based database of firms throughout the country who are seeking financing for projects from venture capital investors. ACE-Net financing is structured as a small corporate offering, falling under either Regulation A or Regulation D, Rule 504 of the Federal securities regulations.

Regulation A allows small corporations to raise up to \$5 million through the sale of corporate securities. Regulation A offerings are required to file a Form U-7 with the SEC, and may be required to submit additional information to the State securities office in which the offering is to take place.

Regulation D, Rule 504 allows corporation to offer up to \$1 million in securities. At the Federal level, Rule 504 registrants must file a Form D, and may have to file a Form U-7 with the relevant State securities office.

ACE-Net will also allow *testing-of-waters* documents to be made available, which allow companies to tentatively disseminate information over the network without prior registration with State and Federal securities regulators.



For more information on the ACE-Net, contact:

Technology Capital Network at MIT

290 Main Street, Lower Level

Cambridge, MA 02142

Phone: (617) 253-8214

Fax: (617) 258-7395

Or through the Small Business Administration home page:

<http://www.sba.gov>

The following list contains Small Business Investment Companies (SBICs) listed by State. Some SBICs may operate in states outside of those in which they are headquartered. Information on investment preferences is provided when available.

Illinois

ABN AMRO Capital (USA) Inc.

Paul Widuch, Chairman
135 South LaSalle Street
Chicago, IL 60674
Phone: (312) 904-6445
Fax: (312) 904-6376

Continental Illinois Venture Corp.

Christopher J. Perry, President
231 South LaSalle Street
Chicago, IL 60697
Phone: (312) 828-8023
Fax: (312) 987-0887

- *Preferred Investment Size:* \$5 to \$25 Million
- *Investment Policy:* Loans and/or Equity
- *Investment Type:* Expansion, Later Stage
- *Industry Preference:* Diversified
- *Geographic Preference:* National

First Chicago Equity Corporation

David J. Vitale, President
Three First National Plaza
Suite 1330
Chicago, IL 60670
Phone: (312) 732-5400
Fax: (312) 732-4098

- *Preferred Investment Size:* \$2 Million and up
- *Investment Policy:* Equity
- *Investment Type:* Expansion, Later Stage, Buyouts
- *Industry Preference:* Diversified
- *Geographic Preference:* National

Heller Equity Capital Corporation

Charles Brisman, Steven Miriani
500 West Monroe Street
Chicago, IL 60661
Phone: (312) 441-7200
Fax: (312) 441-7208

Illinois (con't)

Peterson Finance and Investment Co.

James S. Rhee, President
3300 West Peterson Avenue, Suite A
Chicago, IL 60659
Phone: (312) 539-0502
Fax: (312) 583-6714

- *Preferred Investment Size:* \$50,000 to \$200,000
- *Investment Policy:* Loans
- *Investment Type:* Expansion, Later Stage
- *Industry Preference:* Diversified
- *Geographic Preference:* National

Polestar Capital, Inc.

Wallace Lennox, President
180 N. Michigan Avenue, Suite 1905
Chicago, IL 60601
Phone: (312) 984-9875
Fax: (312) 984-9877

- *Preferred Investment Size:* \$350,000 to \$700,000
- *Investment Policy:* Primarily Equity
- *Investment Type:* Early to Later Stages
- *Industry Preference:* Manufacturing or Proven Technology Areas
- *Geographic Preference:* National

Shorebank Capital Corporation

David Shryock, CEO
7936 S. Cottage Grove Ave.
Chicago, IL 60619
Phone: (773) 371-7030
Fax: (773) 371-7035

- *Preferred Investment Size:* \$100,000 to \$500,000
- *Investment Policy:* Equity and Loans
- *Investment Type:* Early Stage, Expansion, Later Stage
- *Industry Preference:* Diversified
- *Geographic Preference:* Mid-West

Illinois (con't)**Walnut Capital Corp.**

Burton W. Kanter, Chairman of the Board
Two North LaSalle Street, Suite 2200
Chicago, IL 60602
Phone: (312) 269-1700
Fax: (312) 269-1747

Indiana**1st Source Capital Corporation**

Eugene L. Cavanaugh, Jr., Vice President
100 North Michigan Street
P.O. Box 1602
South Bend, IN 46601
Phone: (219) 235-2180
Fax: (219) 235-2227

- *Preferred Investment Size:* \$300,000 to \$500,000
- *Investment Policy:* Equity, Debt with Equity
- *Investment Type:* Later Stage, Expansion
- *Industry Preference:* Diversified
- *Geographic Preference:* Midwest

Cambridge Ventures, LP

Ms. Jean Wojtowicz, President
8440 Woodfield Crossing, #315
Indianapolis, IN 46240
Phone: (317) 469-9704
Fax: (317) 469-3926

- *Preferred Investment Size:* \$100,000 to \$750,000
- *Investment Policy:* Subordinate Debt and/or Equity
- *Investment Type:* Expansion, Acquisition
- *Industry Preference:* Diversified, Manufacturing
- *Geographic Preference:* Within 200 miles of Indiana

Iowa**MorAmerica Capital Corporation**

David R. Schroder, President
101 2nd Street, SE
Suite 800
Cedar Rapids, IA 52401
Phone: (319) 363-8249
Fax: (319) 363-9683

- *Preferred Investment Size:* \$750,000 to \$1.3 Million
 - *Investment Policy:* Sub Debt or Pref Stock-Warrants
 - *Investment Type:* Expansion, Later Stage, MBO/LBO Acq.
 - *Industry Preference:* Manufacturing, Service, Retail
 - *Geographic Preference:* National
-

North Dakota**SBIC, L.P.**

David R. Schroder, Manager
101 Second Street SE, Suite 800
Cedar Rapids, IA 52401
Phone: (701) 298-0003
Fax: (701) 293-7819

- *Preferred Investment Size:* \$300,000 to \$600,000
- *Investment Policy:* Sub Debt or Pref Stock-Warrants
- *Investment Type:* Expansion, Later Stage
- *Industry Preference:* Diversified
- *Geographic Preference:* North Dakota, National

Michigan**Capital Fund, Inc.**

Barry Wilson, President
6412 Centurion Drive Suite 150
Lansing, MI 48917
Phone: (517) 323-7772
Fax: (517) 323-1999

- *Preferred Investment Size:* \$200,000 to \$500,000
- *Investment Policy:* Loans
- *Investment Type:* Expansion, Later Stage
- *Industry Preference:* Diversified
- *Geographic Preference:* Michigan

Dearborn Capital Corp.

Edwin M. Sweda, President
c/o Ford Motor Credit Corporation
The American Road
Dearborn, MI 48121
Phone: (313) 337-8577
Fax: (313) 248-1252

- *Preferred Investment Size:* \$250,000 to \$1 Million
- *Investment Policy:* Loans
- *Investment Type:* Expansion, Later Stage LBO, Acquisition
- *Industry Preference:* Automotive
- *Geographic Preference:* National

Metro-Detroit Investment Company

William J. Fowler, President
30777 Northwestern Highway
Suite 300
Farmington Hill, MI 48334
Phone: (810) 851-6300
Fax: (810) 851-9551

- *Investment Policy:* Loans
- *Investment Type:* Expansion, Later Stage
- *Industry Preference:* Retail, Food Stores
- *Geographic Preference:* Michigan

Michigan (con't)**Motor Enterprises, Inc.**

Mark Fischer, Vice President & Treasurer
NAO Headquarters Bldg. 1-8, Worldwide Pu
30400 Mound Road, Box 9015
Warren, MI 48090
Phone: (810) 986-8420
Fax: (810) 986-6703

- *Preferred Investment Size:* \$100,000 to \$500,000
- *Investment Policy:* Loans
- *Investment Type:* Early Stage, Expansion, Later Stage
- *Industry Preference:* Suppliers to General Motors
- *Geographic Preference:* National

White Pines Capital Corporation

Mr. Ian Bund, President
2929 Plymouth Road, Suite 210
Ann Arbor, MI 48105
Phone: (313) 747-9401
Fax: (313) 747-9704

- *Preferred Investment Size:* \$350,000 to \$1 Million
- *Investment Policy:* Conv Pref Stock, Debt w/ Equity
- *Investment Type:* Expansion
- *Industry Preference:* Manufacturing (Niche or Speciality Mkts.) Value Added
- *Geographic Preference:* Midwest, Southeast

Minnesota**Agio Capital Partners I, L.P.**

Kenneth F. Gudorf, President & CEO
First Bank Place, Suite 4600
601 Second Avenue - South
Minneapolis, MN 55402
Phone: (612) 339-8408
Fax: (612) 349-4232

- *Preferred Investment Size:* \$1 to \$3 Million
- *Investment Policy:* Equity
- *Investment Type:* Growth, Expansion, Later Stage

Minnesota (con't)**Capital Dimensions Ventures Fund, Inc.**

Dean R. Pickerell, President
Two Appletree Square, Suite 335
Minneapolis, MN 55425
Phone: (612) 854-3007
Fax: (612) 854-6657

- *Preferred Investment Size:* \$200,000 to \$2 Million
- *Investment Policy:* Debt and/or Equity
- *Investment Type:* Early Stage, Expansion
- *Industry Preference:* Communications and Technology
- *Geographic Preference:* National

Milestone Growth Fund, Inc.

Esperanza Guerrero, President
401 Second Avenue South, Suite 1032
Minneapolis, MN 55401
Phone: (612) 338-0090
Fax: (612) 338-1172

- *Preferred Investment Size:* \$150,000
- *Investment Policy:* Loans, Loans with Warrants
- *Investment Type:* Expansion, Early Stage
- *Industry Preference:* Diversified
- *Geographic Preference:* National

Norwest Equity Partners IV

Robert F. Zicarelli, General Partner
2800 Piper Jaffray Tower
222 South Ninth Street
Minneapolis, MN 55402
Phone: (612) 667-1650
Fax: (612) 667-1660

Norwest Equity Partners V, L.P.

John F. Whaley, Manager
2800 Piper Jaffrey Tower
Minneapolis, MN 55402
Phone: (612) 667-1667
Fax: (612) 667-1660

- *Preferred Investment Size:* \$3 to \$15 Million
- *Investment Policy:* Equity
- *Investment Type:* Start-Up, Expansion, Later Stage
- *Industry Preference:* Diversified
- *Geographic Preference:* National

Minnesota (con't)**Piper Jaffray Healthcare Capital L.P.**

Lloyd (Buzz) Benson, Manager
222 South 9th Street
Minneapolis, MN 55402
Phone: (612) 342-6335
Fax: (612) 342-1036

- *Preferred Investment Size:* \$750,000 to \$1.5 Million
- *Investment Policy:* Equity Only
- *Investment Type:* Early Stage, Later Stage, Expansion
- *Industry Preference:* Medical/ Healthcare
- *Geographic Preference:* National

Missouri**Bankers Capital Corp.**

Raymond E. Glasnapp, President
3100 Gillham Road
Kansas City, MO 64109
Phone: (816) 531-1600
Fax: (816) 531-1334

- *Preferred Investment Size:* \$100,000
- *Investment Policy:* Loans and/or Equity
- *Investment Type:* Expansion, Later Stage
- *Industry Preference:* Diversified
- *Geographic Preference:* Mid-West

CFB Venture Fund II, LP

James F. O'Donnell, Chairman
11 South Meramec, Suite 1430
St. Louis, MO 63105
Phone: (314) 746-7427
Fax: (314) 746-8739

- *Preferred Investment Size:* \$500,000 to \$3 Million
- *Investment Policy:* Debt w/Warrants Preferred Stock
- *Investment Type:* Expansion, Later Stage, MBO/LBO/Acq.
- *Industry Preference:* Diversified
- *Geographic Preference:* Mid-West

Missouri (con't)**Enterprise Fund, L.P.**

Joseph D. Garea, Managing Director
150 North Meramec
Clayton, MO 63105
Phone: (314) 725-5500
Fax: (314) 725-1732

- *Preferred Investment Size:* \$500,000 to \$1 Million
- *Investment Policy:* Equity Invest.
- *Investment Type:* Expansion, Later Stage, LBOs/MBOs
- *Industry Preference:* Diversified Manufacturing Distribution or Service
- *Geographic Preference:* Midwest

Gateway Partners, L.P.

John S. McCarthy
8000 Maryland Avenue, Suite 1190
St. Louis, MO 63105
Phone: (314) 721-5707
Fax: (314) 721-5135

KCEP I, L.P.

William Reisler, Manager
233 West 47th Street
Kansas City, MO 64112
Phone: (816) 960-1771
Fax: (816) 960-1777

- *Preferred Investment Size:* \$2 Million
- *Investment Policy:* Equity
- *Investment Type:* Start-up, Expansion, MBO/LBO/Acq.
- *Industry Preference:* Technology, Manufacturing
- *Geographic Preference:* Midwest

Missouri (con't)**MorAmerica Capital Corporation**

(Main Office: Cedar Rapids, IA)
911 Main Street, Suite 2424
Commerce Tower Building
Kansas City, MO 64105
Phone: (816) 842-0114
Fax: (816) 471-7339

- *Preferred Investment Size:* \$500,000 to \$1 Million
- *Investment Policy:* Sub Debt or Pref Stock-Warrants
- *Investment Type:* Expansion, Later Stage
- *Industry Preference:* Diversified
- *Geographic Preference:* National

United Missouri Capital Corporation

Noel Shull, Manager
1010 Grand Boulevard
P.O. Box 419226
Kansas City, MO 64141
Phone: (816) 860-7914
Fax: (816) 860-7143

- *Preferred Investment Size:* \$500,000
- *Investment Policy:* Loans, Equity, Debt with Equity
- *Investment Type:* Later Stage
- *Industry Preference:* Manufacturing
- *Geographic Preference:* Midwest

Ohio**Banc One Capital Partners, L.P.**

William P. Leahy, Managing Director
10 West Broad Street, Suite 200
Columbus, OH 43215
Phone: (614) 227-4209
Fax: (614) 224-7675

- *Preferred Investment Size:* \$3 to \$7 Million
- *Investment Policy:* Debt Securities/Equities
- *Investment Type:* Later Stage
- *Industry Preference:* Diversified
- *Geographic Preference:* Midwest, Southwest

Ohio (con't)**Cactus Capital Company**

Edward C. Liu, President
6660 N. High Street, #1B
Worthington, OH 43085
Phone: (614) 436-4060
Fax: (614) 436-4060

- *Preferred Investment Size:* \$50,000 to \$100,000
- *Investment Policy:* Loans or Equity
- *Investment Type:* Expansion, Later Stage
- *Industry Preference:* Diversified
- *Geographic Preference:* Midwest (Ln), National (Eq)

Clarion Capital Corp.

Morris H. Wheeler, President
Ohio Savings Plaza
1801 East 9th Street, Suite 510
Cleveland, OH 44114
Phone: (216) 687-8941
Fax: (216) 694-3545

- *Preferred Investment Size:* \$250,000 to \$1 Million
- *Investment Policy:* Equity Investments
- *Investment Type:* Expansion, Later Stage
- *Industry Preference:* Diversified, Technology Related
- *Geographic Preference:* Midwest, National

Enterprise Ohio Investment Company

Steven Budd, President
8 North Main Street
Dayton, OH 45402
Phone: (513) 226-0457
Fax: (513) 222-7035

- *Preferred Investment Size:* \$50,000 to \$100,000
- *Investment Policy:* Equity Loan Investments
- *Investment Type:* Expansion, Later Stage, Franchise
- *Industry Preference:* Diversified
- *Geographic Preference:* Southwest Ohio

Ohio (con't)**Financial Opportunities, Inc.**

Gregg R. Budo, Manager
210 Broadway East
Cuyahoga Falls, OH 44222
Phone: (330) 922-7193
Fax: (330) 922-7224

Key Equity Capital Corporation

Raymond Lancaster, President
127 Public Square, 6th Floor
Cleveland, OH 44114
Phone: (216) 689-5776
Fax: (216) 689-3204

- *Preferred Investment Size:* \$2 Million
- *Investment Policy:* Willing to make Equity Investments
- *Investment Type:* Later Stage
- *Industry Preference:* Diversified
- *Geographic Preference:* National

National City Capital Corporation

William H. Schechter, President & G.M.
1965 East Sixth Street, Suite 1010
Cleveland, OH 44114
Phone: (216) 575-2491
Fax: (216) 575-9965

- *Preferred Investment Size:* \$1 to \$5 Million
- *Investment Policy:* Loans, Equity, Debt with Equity
- *Investment Type:* Expansion, Financing, Later Stage
- *Industry Preference:* Manufacturing, Distribution, Consumer Products
- *Geographic Preference:* Midwest

Ohio (con't)**River Cities Capital Fund L.P.**

R. Glen Mayfield, Manager
221 East Fourth Street, Suite 2250
Cincinnati, OH 45202
Phone: (513) 621-9700
Fax: (513) 579-8939

- *Preferred Investment Size:* \$750,000 to \$1.5 Million
- *Investment Policy:* Equity
- *Investment Type:* Early Stage, Expansion, Later Stage
- *Industry Preference:* Diversified
- *Geographic Preference:* OH, KY, IN

Wisconsin**Banc One Venture Corp.**

H. Wayne Foreman, President
111 East Wisconsin Avenue
Milwaukee, WI 53202
Phone: (414) 765-2274
Fax: (414) 765-2235

- *Preferred Investment Size:* \$1 to \$10 Million
- *Investment Policy:* Equity Debt with Equity
- *Investment Type:* Later Stage, Expansion, LBO, MBO
- *Industry Preference:* Publishing, Manufacturing, Distribution, Mail-Order
- *Geographic Preference:* National

Capital Investments, Inc.

Steve Rippl, Exec. Vice-President
1009 W Glen Oaks Lane, Suite 103
Mequon, WI 53092
Phone: (414) 241-0303
Fax: (414) 241-8451

- *Preferred Investment Size:* \$500,000 to \$1 Million
- *Investment Policy:* Subordinated Debt w/ Warrants
- *Investment Type:* Expansion, Later Stage
- *Industry Preference:* Manufacturing & Value-Added Distributors
- *Geographic Preference:* Midwest, National

Wisconsin (con't)**Future Value Ventures, Incorporated**

William P. Beckett, President
Plaza East Office Center, Suite 711
330 East Kibourn Ave.
Milwaukee, WI 53203
Phone: (414) 278-0377
Fax: (414) 278-7321

- *Preferred Investment Size:* \$100,000 to \$300,000
- *Investment Policy:* Loans with Equity
- *Investment Type:* Expansion, Start Up
- *Industry Preference:* Diversified
- *Geographic Preference:* Wisconsin

M & I Ventures Corp.

John T. Byrnes, President
770 North Water Street
Milwaukee, WI 53202
Phone: (414) 765-7910
Fax: (414) 765-7850

- *Preferred Investment Size:* \$2 to \$3 Million
- *Investment Policy:* Debt & Equity Securities
- *Investment Type:* Expansion, Later Stage
- *Industry Preference:* Diversified, Manufacturing Medical, Business Service
- *Geographic Preference:* Midwest

MorAmerica Capital Corporation

600 East Mason Street, Suite 304
Milwaukee, WI 53202
Phone: (414) 276-3839
Fax: (414) 276-1885

- *Preferred Investment Size:* \$500,000 to \$1 Million
- *Investment Policy:* Sub Debt or Pref Stock-Warrants
- *Investment Type:* Expansion, Later Stage
- *Industry Preference:* Diversified
- *Geographic Preference:* National

Polaris Capital Corp.

Richard Laabs, President
2100 Northwestern Avenue
Racine, WI 53404
Phone: (414) 637-8388
Fax: (414) 637-6459

Certified Development Company Guaranteed Loans (Section 504)

Objective:	To provide long-term financing for small business fixed assets
Eligibility:	Small, independently-owned businesses that are not dominant in their fields
Cost:	no fixed application costs; individual CDCs may impose application and servicing fees
Services:	Guaranteed loans

The **Certified Development Company Guaranteed Loan** program, also known as the Small Business Administration's (SBA) Section 504 program, helps small businesses finance fixed assets, acquisition of land, buildings, and machinery, as well as construction, renovation, and expansion of existing facilities and leasehold improvements. The program is operated through SBA-licensed Certified Development Companies (CDCs), private organizations chartered to channel investment capital to small and mid-sized enterprises. CDCs work to identify potential business participants, perform credit analyses, recommend loan approval, and close and service loans that they initiate.

CDCs broker Section 504 loans, which are subject to rules established by SBA. Each loan covers a specific small business project, and must be collateralized to the extent that SBA deems reasonable to assure repayment. Personal guarantees of all principles are also required. A Section 504 loan may not exceed \$750,000 unless "significant public policy goals" are involved; the limit may reach \$1 million.

A typical Section 504 loan involves a loan secured by a senior lien from a commercial banker or other lending source covering up to 50% of the project. A CDC provides another 40% of the funds with a junior lien. The business receiving the loan must provide at least 10% of the financing for the Section 504 project.

Eligible firms are businesses with a tangible net worth not in excess of \$6 million, and have had an average net of tax income of less than \$2 million over the preceding two years. Section 504 loans may be used for fixed asset projects such as purchasing land and improvements, including existing buildings, grading, street improvements, utilities, parking lots and landscaping; construction of new facilities; or purchasing long-term machinery and equipment.

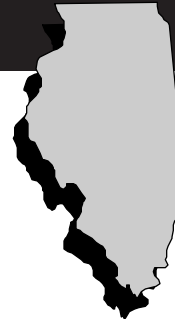
A fee totaling approximately 3% charged by the CDC may be financed by the loan. Section 504 interest rates are determined by adding a fixed increment to the market rate of five and ten year U.S. Treasury issues. Maturities may be of 10 or 20 years.



For more information, contact:

The Small Business Administration, 1-800-U-ASK-SBA

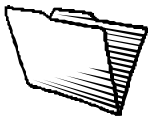
Illinois



Financial Assistance Programs for Manufacturers

Participation Loan Program

The Illinois Department of Commerce and Community Affairs (DCCA) works with banks and other conventional lenders to provide financial assistance to small businesses that will employ Illinois workers. The funds can be used for the acquisition of land and buildings; construction, renovation or leasehold improvements; the purchase and installation of machinery and equipment; and the financing of inventory and working capital. The State will participate in loans up to 25% of the total amount of a project, but not less than \$10,000 or more than \$750,000. Since this program is financed through a revolving loan fund, the total amount of dollars available for Illinois businesses varies each year. However, since 1994, approximately 100 businesses have received loans under this program totaling over \$15 million.



For more information on this program, contact:

Dennis Gorss

DCCA

Phone: (217) 782-3891 or (312) 814-2308

Development Corporation Participation Loan Program

This loan program provides financial assistance, through a Development Corporation, to small businesses that provide jobs to workers in the region served by the Development Corporation. The State will participate in loans up to 25% of the total amount of a project, subject to a maximum of \$750,000. This program operates with a revolving loan fund, so the amount of funding available for Illinois businesses varies each year. Between July 1, 1995, and June 30, 1996, 17 loans were granted totaling \$3.2 million.



For more information on this program, contact:

Dale Fesser

DCCA

Phone: (217) 782-3891 or (312) 814-2308.

Capital Access Program (CAP)

The Illinois Capital Access Program (CAP) is designed to encourage lending institutions to make loans to small and new businesses that do not qualify under conventional lending policies. CAP is a form of loan portfolio insurance which provides coverage to the lender on loan defaults. By participation in CAP, lenders have available to them a proven financing mechanism to meet financial needs of Illinois' small businesses. Business enterprises interested in receiving a loan under CAP must be a for-profit business, be located in Illinois, and employ 500 people or less. All lending criteria including terms, rates, fees, collateral, conditions, etc., are decided by the individual lender. There is no minimum/maximum loan amount under CAP.



For more information on this program, contact:

Dennis Gorss
DCCA

Phone: (217) 782-3891 or (312) 814-2308

Industrial Revenue Bonds

The Illinois Development Finance Authority (IDFA) can issue tax-exempt Industrial Revenue Bonds on behalf of manufacturing companies to finance the purchase of fixed assets such as land, buildings, and equipment or new construction and renovation projects. The projects financed must cost between \$2 million and \$10 million. Between July 1, 1995, and June 30, 1996, a total of \$60.2 million and over 1,100 jobs were generated through the issuance of these bonds.



For more information on this program, contact:

Jim Seneca
IDFA

Chicago Phone: (312) 793-5586

Peoria Phone: (309) 671-0290

Springfield Phone: (217) 524-1567

Marion Phone: (618) 997-6318

Title IX Revolving Loan Program

The Title IX Revolving Loan Program is a joint effort of the Economic Development Administration (EDA) and the Illinois Finance Development Authority (IDFA) to provide supplemental financing to manufacturing companies through Industrial Revenue Bonds. Applicants must be manufacturing companies and be located in one of the following areas designated by the Federal Government through the EDA: Boone, Clinton, Cook, DuPage, Henry, Kane, Kankakee, Knox, Lake, LaSalle, Macon, Madison, Massac, McHenry, Monroe, Montgomery, Peoria, Perry, Rock Island, St. Clair, Tazewell, Vermillion, Will, Winnebago, and Woodford counties and the city of Monmouth.

Manufacturers may use these loans for acquiring buildings and machinery as well as construction and renovation projects. Approximately \$90 million in loans is available for Illinois businesses each year. The average individual loan is approximately \$4 million. IDFA finances 20 to 25 projects each year. This loan program may be used in conjunction with the Direct Loan Program (see below), but may not exceed \$250,000.



For more information on this program, contact:

Rick Frampton

IDFA

Chicago Phone: (312) 793-5586

Peoria Phone: (309) 671-0290

Marion Phone: (618) 997-6318

Direct Loan Program

The Direct Loan Program is offered by the Illinois Development Finance Authority (IDFA) to Illinois businesses that are not able to obtain adequate financing through conventional sources. IDFA works in conjunction with conventional lenders to assist businesses in acquiring land, buildings, machinery, and equipment. The maximum amount for a loan in this program is \$250,000. The interest rate is adjusted yearly, based on the First National Bank of Chicago's Prime rate. IDFA can finance 30% of the total cost of a project. All funds must be for new loans (not refinancing) and may be used only for fixed-asset purposes. On average, 20 to 25 projects are financed through this program annually. Loan amounts are typically between \$100,000 and \$150,000.



For more information on this program, contact:

Sharnell Curtis

IDFA

Chicago Phone: (312) 793-5586

Peoria Phone: (309) 671-0290

Marion Phone: (618) 997-6318.

Export Financing

The Department of Commerce and Community Affairs (DCCA), working with the Illinois Development Finance Authority, has a specialized program to help Illinois companies meet their export financing needs. The City/State Program of the U.S. Export-Import Bank provides banks with short-term working capital loan guarantees to qualified Illinois exporters. The program is aimed at small and mid-size manufacturing firms. Funds can be used to purchase raw materials, finished products and materials, and products, services and labor used to produce goods or services for export.



For more information on this program, contact the following International Trade Centers:

Illinois Department of Commerce and Community Affairs

International Business Division

100 West Randolph Street, Suite 3-400

Chicago, Illinois 60601

Phone: (312) 814-7164

Illinois Development Finance Authority

2 North LaSalle Street, Suite 980

Chicago, Illinois 60602

Phone: (312) 793-5586

Illinois Development Finance Authority

400 East DeYoung, Suite 5

Marion, Illinois 62959

Phone: (618) 997-6318

Eximbank Chicago Office

19 South LaSalle Street, Suite 902

Chicago, Illinois 60603

Phone: (312) 641-1915

DCCA also makes available a variety of financial programs (see above) which may be specifically tailored for export-related businesses.



For more information on these programs, contact:

Illinois Department of Commerce and Community Affairs

Bureau of Business Development, Loan Administration Division

620 East Adams Street

Springfield, Illinois 62701

Phone: (217) 524-0165

Enterprise Zones

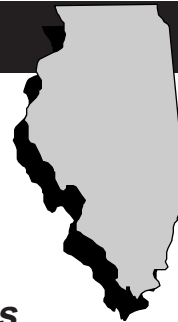
There are currently 91 Enterprise Zones in Illinois, the maximum number that may be designated according to Illinois law. All offer the same mix of State incentives designed to encourage companies to locate or expand within a zone. In addition, each zone offers distinctive local incentives to enhance business or neighborhood development efforts. Such local incentives include abatement of property taxes on new improvements, homesteading, and “shopsteading” programs, waiver of business licensing and permit fees, streamlined building code and zoning requirements and special local financing programs and resources. These incentives include:

- **Sales Tax Exemption:** A 6.25% State sales tax exemption for building materials.
- **Facilities Sales Tax Exemption:** A 6.25% State sales tax exemption on purchases of tangible personal property to be used in the manufacturing or assembly process or in the operation of a pollution control facility.
- **Enterprise Zone Utility Tax Exemption:** A utility tax exemption on gas and electricity.
- **Enterprise Zone Investment Tax Credit:** A State investment tax credit of 0.5% for machinery, equipment, and buildings.
- **Dividend Income Deduction:** Individuals, corporations, trusts and estates are not taxed on dividend income from corporations doing business in an Enterprise Zone.
- **Jobs Tax Credit:** A \$500 credit on Illinois income taxes for each job created in the Zone.
- **Interest Deduction:** Financial institutions are not taxed on the interest received on loans for development within an Enterprise Zone.
- **Contribution Deduction:** Businesses may deduct double the value of a cash or in-kind contribution to an approved project of a designated organization from taxable income.

Enterprise Zones in Illinois

Altamont	Freeport/Hanover/Stephenson County/Jo Daviess Co.	Mt. Vernon/Jefferson Co.
American Bottoms (Cahokia, Dupo, Sauget, St. Clair Co.)	Galesburg	Nashville/Washington Co.
Bartonville/Peoria Co.	Greenville	Olney/Richland Co.
Beardstown	Harvey	Ottawa/LaSalle Co.
Belleville	Hoffman Estates	Pekin/Tazewell Co.
Belvidere/Boone Co.	Illinois Valley (LaSalle, Peru, N. Utica, Oglesby, LaSalle Co.)	Peoria
Benton/Franklin Co.	Jackson Co. (Murphysboro, Carbondale)	Perry Co. (DuQuoin, St. Johns, Pinckneyville)
Bloomington/Normal/McLean Co.	Jacksonville	Quad Cities (Moline, East Moline, Silvis)
Bureau/Putnam Co.	Kankakee Co.	Quincy/Adams Co.
Cairo/Alexander Co.	Kankakee River Valley (Aroma Park, Kankakee, Bradley, Bourbonnais)	Rantoul
Cal-Sag (Robbins, Blue Island, Worth, Alsip, Crestwood)	Kewanee	Riverbend (Alton, E. Alton, Hartford, Roxana, S. Roxana, Wood River, Madison Co.)
Calumet City Area	Lawrenceville/Lawrence Co.	Robinson
Canton/Fulton Co.	Lee Co. (Ashton, Franklin Grove, Dixon, Amboy, Paw Paw)	Rock Island
Carmi/White Co.	Lincoln/Logan Co.	Rockford
Centralia Area	Macomb/McDonough Co.	Salem/Marion County
Champaign/Champaign Co.	Macoupin County (Gillespie, Carlinville)	Saline Co. (Carrier Mills, Eldorado, Harrisburg, Muddy, Raleigh)
Chicago I-VI	Marshall Co. (Henry, Lacon, Sparland, Toluca, Wenona)	South Beloit/Rockton/Winnebago Co.
Cicero	Massac Co. (Metropolis, Joppa)	Southwestern Madison Co.
Clark County (Casey, Marshall, Martinsville, Westfield, Clark Co.)	Maywood	Springfield
Coles County (Charleston, Mattoon, Oakland, Coles Co.)	McCook/Hodgkins	Streator/LaSalle Co./Livingston Co.
Danville/Tilton	McLeansboro/Hamilton Co.	Summit/Bedford Park
Decatur	Mendota	Taylorville/Christian Co.
Des Plaines River Valley (Joliet, Lockport, Rockdale, Romeoville)	Monmouth	Urbana
East Peoria	Montgomery Co. (Litchfield, Hillsboro, Schram City, Taylor Springs)	Vandalia/Fayette Co.
East St. Louis/Washington Pk	Morton	Washington
Effingham/Effingham Co.	Mound City/Pulaski Co.	West Frankfort
Elgin	Mt. Carmel	Whiteside Co. (Morrison, Rock Falls, Sterling)
Fairfield/Wayne Co.		Williamson Co. (Carterville, Herrin, Johnston City, Marion, Cambria, Crainville, Energy)
Flora/Clay Co.		
Ford Heights		

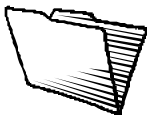
Illinois



Technical Assistance Programs for Manufacturers

First-Stop Business Information Center of Illinois

The First-Stop Business Information Center provides individuals and businesses with access to information and referral assistance to guide them through the permitting, licensing, and regulatory processes. First-Stop can also link them to other available resources that can help them comply with Government regulations and enhance their competitiveness.



For more information on this program, contact:

First-Stop Business Information Center

Phone: (800) 252-2923 and press 5

Illinois Small Business Environmental Assistance Program

The Illinois Small Business Environmental Assistance Program offers services to help small businesses understand regulatory requirements under the Clean Air Act Amendments of 1990. Through the Illinois Small Business Environmental Assistance Help Line (800/252-3998), an environmental specialist is available to answer environmental compliance questions. The program also operates a clearinghouse of more than 300 environmental publications including rules, fact sheets, guides, case studies, a listing of Illinois environmental service companies and more. Information on Federal Register notices, U.S. EPA press releases and permit forms are available 24-hours-a-day through the Access Illinois electronic bulletin board system. All services are free of charge and confidential.



For more information on this program, contact:

Illinois Small Business Environmental Assistance Program

Phone: (800) 252-3998

Business Expansion, Retention and Location Assistance

Industry development specialists provide business development assistance to companies wishing to locate or expand in Illinois.



For more information, call:

(800) 252-2923

Technology and Modernization Initiatives (COMPETE)

Small and medium-sized manufacturing facilities are served through the COMPETE (Coalition for Manufacturing Performance through Technology) initiative. COMPETE is designed to create a de-centralized manufacturing extension network to provide businesses access to information, technology and the modernization resource base they need to improve and maintain competitiveness in National and international markets. DCCA-funded Manufacturing Extension Centers (MEC) provide direct assistance to businesses seeking to become more competitive by adopting new technologies, advanced processes or modern business practices. In addition, DCCA works closely with the Governor's Science Advisory Committee and The Illinois Coalition to administer the Illinois Technology Challenge Grant Program. These groups work to promote a proper State role to enhance the commercialization of new technologies and secure Federal research and development projects for the State, while leveraging private and Federal investments.



For more information on this program, contact:

DCCA

Phone: (312) 814-2366 or (217) 524-5696

Or any of the following COMPETE Manufacturing Extension Centers:

Chicago Manufacturing Center — Chicago

Serves the Chicago Area

Phone: (312) 265-2020

Joliet Junior College Manufacturing Extension Center — Joliet

Serves Will County

Phone: (815) 727-6544

Western Illinois Manufacturing Technology Extension Center — Moline

Serves Rock Island, Knox, Stephenson, Adams, Lee, Fulton and area counties

Phone: (309) 792-5330

North Central IL MEC — Rockford

Serves Winnebago, Kane, DeKalb, McHenry, Kane and area counties

Phone: (815) 654-5501

Central Illinois Manufacturing Innovation Consortium — Peoria

Serves Peoria, McLean, Sangamon, Tazewell, LaSalle and area counties

Phone: (309) 677-3416

Southwestern Illinois Manufacturing Outreach Service — Edwardsville

Serves Madison, St. Clair and area counties

Phone: (618) 692-2929

Southern IL Manufacturing Extension Service — Carbondale

Serves Jackson, Williamson, Jefferson, Pulaski, Saline, and area counties

Phone: (618) 453-5046

Industry Specific Centers: American Foundrymen's Society — Des Plaines

Serves the metalcasting industry

Phone: (708) 824-0181

Chemical Industry Council of Illinois — Springfield

Serves the chemical and coatings industry

Phone: (217) 522-5805

Tooling & Manufacturing Association — Park Ridge

Serves the machine tool industry

Phone: (708) 825-1120

Northwestern University's Electronics MEC — Evanston

Serves the electrical/electronic equipment/instrumentation industry

Phone: (708) 491-4794

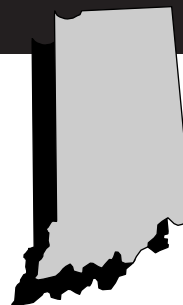
Other Resources:

U of I Hazardous Waste Research & Information Center — Champaign

Provides technical assistance, such as pollution prevention, for companies

Phone: (217) 333-8940

Indiana



Financial Assistance Programs for Manufacturers

Indiana Community Business Credit Corporation (ICBCC)

Loans are made to existing small to medium-sized companies that require supplemental financing to meet growth needs. Only Indiana-based companies or Indiana operations are eligible. The ICBCC is a consortium of Indiana banks formed to engage in high-risk lending. ICBCC's participation in a project allows for the funding of loans that exceed the limits banks ordinarily set based on conventional lending practices. Eligible uses include primary or subordinated working capital, long-term loans for new equipment, and first or second mortgages on existing properties as well as planned construction projects. Loan amounts range from \$100,000 to \$750,000, and must be at least matched by a participating lender. Thus, a minimum project size is \$200,000. Interest rates are generally several points above prime rate due to the high-risk nature of the projects. Terms can range from 3 to 25 years. Applications must be accompanied by a detailed business plan, current and past financial statements, cash flow projections and earnings projections. Since 1986, 51 companies have received loans totaling \$18 million.



For more information or to apply, contact:

Cambridge Capital Management Corporation

Phone: (317) 469-9704 or through one of the various member banks

Capital Access Program (CAP)

CAP helps financial institutions lend money to Indiana businesses that do not qualify for loans under conventional lending policies. Loan proceeds must be used for commercial or industrial purposes for a project or enterprise located in Indiana that fosters economic development. CAP loans may be of any amount. The lender and the borrower negotiate all terms and conditions of the loan. A reserve fund is established for each lender participating in CAP. The borrower, lender, and Indiana Development Finance Authority (IDFA) make premium payments into the account each time a CAP loan is made. The borrower pays a premium between 1.5% and 3.5% of the loan amount (as required by the lender), the lender matches that payment, and the IDFA matches the combined total. From October 1993 to June 1997, CAP has granted 1,258 loans totaling \$55.5 million.



For more information on CAP, contact:

IDFA at (317) 233-4332

Industrial Energy Efficiency (Loan) Fund

Businesses that operate in Indiana or will operate in the State as a result of a project may be provided loans to improve energy efficiency in the industrial process. The loans are available for the acquisition and installation of energy-efficient equipment. The maximum amount available per applicant is \$250,000 or 50% of the total eligible project costs, whichever is less. Interest rate is 0%, and repayment terms may be tied to projected energy-cost saving. The Indiana Department of Commerce typically provides loans for four to six projects a year. The average loan is in excess of \$125,000.



For more information on this program, contact:

Dan Merkler

Indiana Department of Commerce's Energy Policy Division

Phone: (317) 232-8961

Industrial Energy Efficiency (Grant) Program

Businesses that operate in Indiana with less than 50 employees or will operate in the State as a result of this project are eligible for grants to improve energy efficiency in the manufacturing process. The grants are available for acquisition and installation of energy-efficient equipment or to help small manufacturers identify, evaluate, and prioritize energy-efficient improvements. The maximum amount available per applicant is \$50,000. A 20% match is required. In its first 10 months in existence (August 1996 to June 1997), this forward thinking program provided grants for 61 projects totaling \$2.2 million. Demand for this program has far exceeded supply.



For more information on this program, contact:

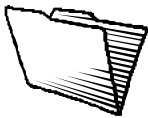
Dan Merkler

Indiana Department of Commerce's Energy Policy Division

Phone: (317) 232-8961

Product Development/Commercialization Funding

Indiana manufacturers in need of financing to support research and development projects or to support commercialization of new technologies may be provided loans through the Product Development/Commercialization Funding program. This program, administered by the Business Modernization and Technology Corporation (BMT), is targeted for projects that are not yet eligible for conventional bank financing or venture-capital financing. Funding is available for the development and commercialization of science and technology-based products and processes. Loan amounts are determined by the BMT and the business. Leveraging of outside funds is encouraged in the loan consideration. Before funds are disbursed, a formal funding contract must be negotiated. BMT funding is tied to the achievement of certain goals by participants, with funds being advanced by BMT under a Promissory note that bears interest at points over time. In order to allow borrowers time to “get on their feet” before payments begin, funding often provides for a debt-service holiday for a period of time after funds are advanced. Funding deadlines are April, August, and December of each year. BMT typically grants six to eight loans per year. Average loans range between \$75,000 and \$100,000, but larger loans are possible. In recent years the State has appropriated \$2 million for the annual operation of this program.



For more information on this program, contact:

Bill Glennon

Indiana Business Modernization and Technology Corporation

Phone: (317) 635-3058

Economic Development for a Growing Economy (EDGE)

Businesses that expand in Indiana or will be operating in the State as a result of a project are eligible to receive tax credits based on payroll. Indiana individual income tax withholdings from company employees can be credited against the company's Indiana corporate income tax liability. Excess withholdings shall be refunded to the company. The credits have no effect on employees' income tax liability. The credit awarded can be a fixed amount per year or a percentage of taxes withheld. Credits can be awarded for a period of up to ten years. The project must create new, competitively paying jobs for Indiana residents. Credits are considered when a project would otherwise locate in a different State, and when local governments have committed significant incentives. Companies must agree to operate in the State for at least twice as long as the duration of the credits.



For more information on this program, contact:

Indiana Department of Commerce

Phone: (317) 232-8888

Loan Guaranty Programs

Loan guaranties are available to assist banks in financing high-risk manufacturing projects, including land acquisitions, building acquisitions or improvements, machinery, equipment, facilities, and working capital. Manufacturing projects must create or retain Indiana jobs. Loan guaranties are available for up to \$2 million, but loans between \$200,000 to \$400,000 are more typical. The Indiana Development Finance Authority typically provides three to five loans per year.



For more information on this program, contact:

William Hill

Indiana Development Finance Authority

Phone: (317) 233-4332

Alternative Energy Systems Program

Businesses that operate in Indiana may be provided grants to fund eligible alternative-fuel technologies and infrastructure development. Eligible technologies include but are not limited to alternative fuels, landfill methane outreach, agricultural applications, geothermal heat pumps, wood waste boilers, and solar repair and service. The maximum amount available per project is \$10,000. Matching funds are required. Last year, the program was not fully utilized with loan supply exceeding demand. The program has only been in operation since July 1996 in which \$500,000 was appropriated for grants as low as \$2,000. In its first year in operation, the program has provided only 20 grants totaling less than \$200,000.



For more information or to apply, contact:

Niles Parker

Energy Policy Division of the Indiana Department of Commerce

Phone: (317) 232-8940

Enterprise Development Fund (EDF) and Indiana Microloan Program

The Indiana Small Business Development (ISBD) Corporation has established a variety of local revolving loan funds to assist non-traditional Indiana entrepreneurs and businesses of different sizes. Local Enterprise Development Fund (EDF) pools serve disadvantaged entrepreneurs seeking debt financing in amounts between \$25,000 and \$100,000. They also provide equity investments of \$100,000 for all Indiana businesses. Microloan pools assist disadvantaged entrepreneurs borrowing less than \$25,000. Eligibility, terms, and conditions are determined by local loan committees.



For more information on this program, contact:

ISBD Corporation

Phone: (317) 264-2820

For information on revolving loan funds in the following communities:

Gary Government Contracting Corporation (EDF/Microloan)—Gary

Phone: (219) 881-4400

Corp. for Entrepreneurial Development (EDF/Microloan)—South Bend

Phone: (219) 236-9335

Indianapolis Business Development Corporation (EDF)—Indianapolis

Phone: (317) 687-0272

Eastside Community Fund (EDF)—Indianapolis

Phone: (317) 637-7300

Cambridge Ventures (EDF)—Indianapolis

Phone: (317) 469-9704

Lynx Capital Corporation (EDF)—Indianapolis

Phone: (317) 469-9704

Hoosier Valley Economic Opportunity Corp. (Microloan)—Jeffersonville

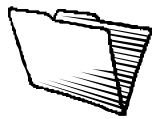
Phone: 812/288-6451

Patchwork Central (Microloan)—Evansville

Phone: 812/428-0241

Certified Development Companies (CDC)

Small businesses that (1) are located in Indiana, (2) are corporations, partnerships or proprietorships, (3) create and/or retain jobs, (4) have a net worth less than \$6 million, and (5) have an average net profit less than \$2 million per year for the last two years, may be eligible for long-term, fixed-rate financing for fixed-asset needs. These fixed-asset needs include the purchase of land and buildings, machinery and equipment, and renovation and leasehold improvements. The CDC provides up to 40% of the cost with a commercial bank financing 50% of the total cost. The CDC portion is limited to \$750,000. The minimum project cost is \$125,000. Terms may be for 10 or 20 years. The interest rate on the CDC debenture is fixed at closing at approximately 1% over the Treasury-bond rate. This results in a blended interest rate that is often below conventional rates. Since its inception in 1983, this program has provided a total of \$126 million in loans to 426 businesses in Indiana.



For more information on this program, contact:

Delores King

Indiana Statewide Certified Development Corporation

Phone: (317) 469-6166

Or contact the following Local Certified Development companies:

Allen County Community Development Corporation—Ft. Wayne

Phone: (219) 427-1127

Mid City Pioneer Corporation—Indianapolis

Phone: (317) 236-6241

St. Joseph County Business Development Corporation—South Bend

Phone: (219) 235-9278

Tax-Exempt Bonds

Indiana manufacturing companies are eligible to receive tax-exempt bonds that provide fixed-asset financing at competitive rates. Limits vary according to the type of project. Most manufacturing facilities are limited to \$10 million. The project must comply with all Federal and State laws regarding the issuance of tax-exempt bonds. The State volume cap is approximately \$290 million with over half reserved for Indiana manufacturers.



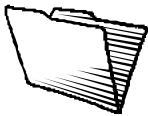
For more information or to apply, contact:

Indiana Development Finance Authority

Phone: (317) 233-4332

Training 2000 Program

Manufacturers are eligible for financial assistance in the form of a grant for reimbursement of instructional costs to train new or existing employees, including instructor wages, tuition and training materials. Eligible uses include basic-skills, transferable-skills and quality-assurance training as well as company-specific skills training needed to support existing and future capital investment. Finances up to 50% of eligible training costs. Awards for retraining have a maximum ceiling of \$200,000.



For more information or to apply, contact:

Indiana Department of Commerce

Phone: (317) 232-8888

Small Business Innovation Research (SBIR) Bridge Funding

Small Business Innovation Research (SBIR) bridge funding is a recent enhancement to a Federal grant program, designed to assist Indiana companies intending to commercialize technologies developed as a result of Federal SBIR funding. The Indiana Business Modernization and Technology Corporation (BMT) is interested in helping those companies intending to commercialize technologies developed as a result of SBIR funding, and who are submitting an SBIR Phase II proposal to fund commercialization. Bridge financing awards are limited to a maximum of \$50,000. The following criteria have been established by BMT for those companies requesting SBIR bridge funding:

- The company must be an Indiana company which has signed a contract for an SBIR Phase I award.
- The company must submit a Phase II proposal following up on the Phase I award.
- The SBIR project must be scientific or technical in nature.
- The company must have the potential and the intent to develop a viable business in Indiana utilizing the technology being developed.
- The company must submit a plan for the purpose of commercializing the technology.
- The company must demonstrate a financial need for the BMT support.



For more information or to apply, contact:

Delbert Schuh

Indiana Business Modernization and Technology Corporation

Phone: (317) 635-3058

Trade Finance Program

Indiana businesses that (1) have been in business for one or more years, (2) offer reasonable assurance of repayment, and (3) have a positive net worth are eligible for the Trade Finance Program. Product content must be at least 50% U.S.-made (not military related) and the destination country must have authorized support by the Export-Import Bank of the United States (Eximbank). The International Trade Division (ITD) works in partnership with Eximbank to provide export financing assistance to qualified Indiana exporters. Amounts, terms, and conditions differ with each program. ITD offers the following programs:

- 90% working-capital loan guarantees: the proceeds may be used to purchase finished products, materials, services, and labor to produce goods for export.
- Medium- and long-term export guarantees and loans: guarantees provide repayment protection for private-sector loans to creditworthy buyers of exported U.S. goods and services. Loans provide competitive, fixed-rate financing for U.S. export sales. Direct loans may be extended to foreign buyers of U.S. exports. Intermediary loans may be extended to fund responsible parties that extend loans to foreign buyers.
- Export credit insurance: protects exporters against political and commercial risk.



For more information or to apply, contact:

Autumn Brown

Indiana Department of Commerce's International Trade Division

Phone: (317) 233-3762

Recycling Promotion and Assistance Fund

Businesses that operate in Indiana or will operate in the State as a result of a project may be provided loans to enhance the development of markets for recyclable materials. The loans are available for the acquisition and installation of specialized manufacturing equipment and machinery or the conversion of existing equipment and machinery for the manufacturing of products that contain recycled materials or for the final processing of secondary materials. The loan amounts are the lesser of \$500,000 or 50% of the total eligible project costs. A private-sector investment must be made, and at least a 10% equity investment is required. Terms can be up to 10 years or the life of the asset, whichever is less. The interest rate is at or below prime. Between 1990 and 1996, 21 loans were provided to Indiana manufacturers totaling \$6.6 million.



For more information or to apply, contact:

Julie Rhodes

Energy Policy Division of the Indiana Department of Commerce

Phone: (317) 232-8940

Trade Show Assistance Program (TSAP)

Indiana small manufacturers having worldwide employment of 500 or less and manufacture at least 51% of their product in Indiana may receive assistance under Trade Show Assistance Program (TSAP). Applicants must also be ready to export, have available manufacturing capacity for export, and have basic export knowledge. TSAP provides financial assistance to Indiana manufacturers by reimbursing a portion of the costs incurred while exhibiting their products at overseas trade shows. Reimbursement includes 100% of exhibit space rental or \$5,000, whichever is less. Eligible companies may use this program one time per fiscal year and may not use the grant for the same show in two consecutive years. Applicants must apply 3 months in advance of the trade show and agree to complete post-show, 6 and 12-month evaluations. The average grant is approximately \$3,500. Since July 1988, TASP has assisted over 300 companies with trade show grants totaling approximately \$1.5 million.



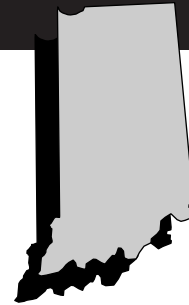
For more information on this program, contact:

Paula Vandevanter

Indiana Department of Commerce's International Trade Division

Phone: (317) 232-8845

Indiana



Technical Assistance Programs for Manufacturers

Energy Policy Division Services

The Energy Policy Division of the Indiana Department of Commerce provides a wide range of assistance in energy efficiency, alternative energy and recycling market development programs for Indiana manufacturers. The division provides access to Federal and State funding programs and other resources. Workshops offer training in assessing energy usage and present methods for increasing energy efficiency and reducing energy costs. A toll-free hotline (800/382-4631) provides access to information on energy price, supply and trend data in Indiana. The hotline also provides referrals to National energy information sources and technical databases. The Recycling Market Development Program provides technical assistance in identifying markets for recyclable materials. The program also helps manufacturers locate reliable supplies of recycled feedstock.



For more information on this program, contact:

Indiana Department of Commerce's Energy Policy Division

Phone: (317) 232-8940

The Indiana Quality Initiative (IQI)

IQI provides quality-awareness education, assessments, and information to companies attempting to implement or improve quality-management programs. The program, administered by the Indiana Business Modernization and Technology Corporation (BMT), is designed to help companies understand and meet industrial quality standards. IQI field agents are available to travel to company sites throughout Indiana. The Indiana Quality Improvement Award has been established by the Office of the Lt. Governor to involve Hoosier companies in the quality improvement process and to recognize achievement. BMT works with industry leaders and professional quality organizations to promote this program.



For more information on this program, contact:

Indiana Business Modernization and Technology Corporation

Phone: (317) 635-3058

Regional Manufacturing Extension Center (RMEC)

The Regional Manufacturing Extension Center is maintained by the Indiana Business Modernization and Technology Corporation and is designed to help small and medium-sized manufacturing businesses assess and solve problems relating to technology, training, marketing and financing. The Center provides a wide array of services ranging from helping a company implement marketing techniques, to acquiring a complete computer-aided design system. The program is now operating in five multi-county regional centers and is expected to expand statewide over the next two years.



For more information or to apply, contact:

Delbert Schuh

Indiana Business Modernization and Technology Corporation

Phone: (317) 635-3058

Indiana Micro-Electronics Center

The Indiana Micro-Electronics Center (IMC) is part of the Indiana Business Modernization and Technology Corporation and is designed to assist small and medium-sized Indiana businesses in gaining a competitive advantage in their products through micro-electronics and, in particular, Application Specific Integrated Circuits (ASICs). An ASIC is an electronic component in which literally thousands of electronic components are incorporated onto a single chip of silicon in order to create a custom-designed integrated circuit. Because an ASIC replaces many discrete electronic components, ASIC's can offer tremendous advantages in size, costs, reliability and performance. The IMC will make an initial product assessment to determine the feasibility of using ASIC in your product, as well as a cost benefit analysis. Once a decision is made by the business owner to go ahead, the IMC staff will work with the business to accomplish a technology transfer of ASIC expertise.



For more information or to apply, contact:

Delbert Schuh

Indiana Business Modernization and Technology Corporation

Phone: (317) 635-3058

Business Modernization Tools

Business Modernization Tools are designed by the Indiana Business Modernization and Technology Corporation (BMT) to assist business and economic development organizations in facilitating a proven total business assessment. BMT takes a full-circle look at a business rather than focusing on isolated problems (unlike many existing assessment tools). The BMT systematic approach focuses on a complete “high-impact assessment” of eleven specific Business and Technical Areas of a firm including: the business and its product or service; sales and marketing; manufacturing operations; finance; quality; materials management; product design engineering; personnel; facilities; management information systems; and environmental/safety issues.



For more information on this program, contact:

Indiana Business Modernization and Technology Corporation

Phone: (317) 889-9680

Benchmarking Information and Financial Analysis Report (BI-FAR)

A vital component of the Indiana Business Modernization and Technology Corporation (BMT) assessment entails an operationally focused financial review called Benchmarking Information and Financial Analysis Report (BI-FAR). It compares a firm to similar-sized companies in the same SIC (Standard Industrial Code) category and concentrates on operational issues such as inventory, gross margin, cost of goods sold, operating costs, net income, and cash flow. This helps the assessor to prepare and focus on the appropriate questions to ask while conducting the complete assessment.

The program is designed to allow assessors to take a comprehensive look at the company in an effective and efficient manner with minimal time demands (a total of 24 person-hours are required). A complete training package is provided with on-site training by a BMT facilitator. BI-FAR is unique to the assessment system and yields a total financial picture of the business that identifies areas of opportunities for improvement within the company.

Indiana BMT Corporation charges interested organizations \$45,000 for two-and-a-half days of on-site training for up to 25 people and provides assessment tools and documents for up to five people. The fee also covers licensing and updates for the tool. Travel expenses for on-site training are additional.



For more information on this program, contact:

Indiana Business Modernization and Technology Corporation

Phone: (317) 889-9680

Cinergy (Indiana)

Cinergy is one of the largest and most experienced economic development organizations in the Midwest, with site selection specialists on staff both in Indiana and Ohio. Cinergy helps businesses find the resources they need. Cinergy is the 13th largest electric utility in the Nation. Cinergy offers a wide variety of ways to learn about opportunities for business growth and expansion. Cinergy provides its services to 69 of Indiana's 92 counties. As part of Indiana's largest electric utility, Cinergy's Indiana Partners In Economic Development is a resource for business information about Indiana.



For more information on this program, contact:

Cinergy

Phone: (317) 838-2000 or (800) 688-0688

International Trade Services

Small and medium-sized firms that are either new to export or are seeking new markets and manufacture a minimum of 51% of their product in Indiana are eligible to receive international trade services. International trade specialists offer assistance to Indiana companies in export development in order to increase the sale of Indiana products worldwide. Services include:

- Determining export capability;
- Conducting market research;
- Providing export counseling;
- Facilitating international contacts;
- Participating in select overseas trade shows;
- Leading overseas trade missions.



For more information on this program, contact:

Indiana Department of Commerce

International Trade Division

Phone: (317) 233-3762

Small Business Development Center Network (SBDC)

Indiana small businesses seeking financial, management, and technical assistance may use the SBDC. The SBDC is a network of local offices that serves as the first stop for Indiana companies seeking help. A network of 14 regional and 58 satellite offices, the SBDC links businesses with Federal, State, and local assistance programs. Services include:

- INFORUM Indiana, a 24-hour phone and fax-back clearinghouse.
Call 800/726-8000;
- One-on-one management and technical consulting;
- Localized training, seminars and workshops;
- Access to information, self-help materials, and expert assistance.



For more information on this program, contact:

Indiana Small Business Development Center Network

Phone: (317) 264-6871

Additionally, there are 14 regional centers located in:

Bloomington	Lafayette
Columbus	Madison
Evansville	Muncie
Fort Wayne	Northwest Indiana (Portage)
Indianapolis	Richmond
Jeffersonville	South Bend
Kokomo	Terre Haute

Iowa

Financial Assistance Programs for Manufacturers



Alternate Energy Revolving Loan Program

The basic intent of the Alternate Energy Revolving Loan Program (AERLP) is to encourage the development of alternate energy production facilities and small hydroelectric facilities within the State of Iowa. The Iowa Energy Center (IEC) was chosen to establish guidelines and administer the program. The AERLP provides low interest loans to individuals and organizations who want to build alternate energy production facilities in Iowa. The loan program is open to all individuals or organizations with the exception of utilities that are not required to be rate regulated. The energy production facility must be located in Iowa. The loans are not available for refinancing existing loans.

As structured, interested parties submit a technical application to the IEC which provides specific technical, operational, and cost details about the planned alternate energy production facility. All submissions received during a given application cycle are reviewed and ranked. Those applications receiving the highest ranking are selected to receive loans, subject to the amount of funds currently available in the program. Applications must be received by June 30 and December 31 of each year. All applications received during a given cycle will be reviewed at the close of that cycle.

Successful applicants will receive a single, low-interest loan that consists of a combination of AERLP funds and lender-provided funds. The AERLP will provide 50% of the total loan, up to a maximum of \$250,000. The AERLP funds will bear no interest. The remainder of the loan will be made by the lender at an interest rate negotiated between the applicant and the lender. The loan term is established by the lender, but the maximum term allowed for the AERLP funds is 20 years. The lender manages the entire loan and arranges repayment of the AERLP share of the loan to the Iowa Energy Center. As the loans are paid back to the IEC, those funds revolve back to the program and are made available to new applicants.



For more information or an application, contact:

Keith Kutz

IEC

Phone: (515) 294-3332

E-mail: kkutz@energy.iastate.edu

Community Economic Betterment Account (CEBA)

The CEBA program provides financial assistance to businesses creating new job opportunities or retaining existing jobs. Assistance may be provided to encourage new business start-ups, expansion or retention of existing businesses, or the recruitment of out-of-state businesses into Iowa. All cities, counties or merged area schools (community colleges), are eligible to apply on behalf of businesses that are expanding or are new business ventures in Iowa. Projects eligible for CEBA funding include, but are not limited to, the following: building construction or reconstruction, acquisition of land and equipment, and operating and maintenance expenses. Assistance may be in the form of loans (0% to 6% interest) and/or forgivable loans. The maximum award of any type is \$1 million based in part on job creation, quality of employment, and benefits for the State and local community. Since its inception, CEBA has provided \$77 million worth of loans for over 500 projects. The average loan under CEBA is approximately \$150,000.



For more information on this program, contact:

Iowa Department of Economic Development

Division of Business Finance

Phone: (515) 242-4819 or (800) 245-IOWA

E-mail: SmartState@ided.state.ia.us

Targeted Small Business Financial Assistance Program (TSBFAP)

This program is designed to assist in the creation and expansion of minority and women-owned businesses within Iowa. Assistance is provided in the form of low interest loans up to \$25,000, loan guarantees up to \$40,000, or equity loans up to \$25,000. Eligible applicants are small businesses with \$3 million or less in annual sales and certified by the Iowa Department of Inspections and Appeals as a “Targeted Small Business” (at least 51% owned, operated and actively managed by one or more women, minority persons or persons with disabilities). Awards may be used for business expenses including, but not limited to, the purchase of and improvement to land and buildings, equipment and furnishings, and defined working capital, inventory, and operating expenses.



For more information on this program, contact:

Iowa Department of Economic Development

Phone: (515) 242-4700 or (800) 245-1216

E-mail: SmartState@ided.state.ia.us

Iowa New Jobs and Income Program (NJIP)

Qualifying businesses participating in the New Jobs and Income Program (NJIP) receive substantial benefits, including (1) a 3% withholding tax credit applied to the company's job training fund, which essentially doubles the training funds otherwise available, (2) a 13% research and development activity corporate tax credit that may be carried forward or refunded, and (3) an investment tax credit of up to 10% for use against Iowa's corporate income tax. The credit, based on machinery, equipment, buildings and improvements, can be carried forward for seven years. Businesses are eligible for NJIP benefits if they create and maintain at least 50 new jobs for at least five years and if they do not close or significantly reduce operations elsewhere in Iowa in order to relocate the operation to the proposed community.

Between July 1994 and July 1997, nearly \$2 billion in new capital investment has been made by participating companies. Participants to date include: Ag Processing Inc., American Packaging Corporation, Ball Plastic Container Corporation, Bunge Corporation, Cargill Inc., Cedar River Paper Company, Guardian Industries, HON Industries, Hunt-Wesson, Inc., IPSCO Tubulars Inc., Kind & Knox Gelatin, McLeod, Magna/Cosma International, Monsanto, R.R. Donnelley, Roquette America, United Screw & Bolt Corporation, and Western Ethanol Corporation.

Businesses interested in this program should consult the Iowa Department of Economic Development along with relevant local organizations to determine program eligibility.



For more information on this program, contact:

Iowa Department of Economic Development

Phone: (515) 242-4707 or (800) 245-IOWA

E-mail: SmartState@ided.state.ia.us

Iowa Capital Corporation (ICC)

The Iowa Capital Corporation (ICC) is a for-profit venture capital corporation established with funds provided by the State of Iowa and equity investments by Iowa financial institutions, insurance companies, and electric utilities. The ICC's primary purpose is to provide an attractive risk-adjusted rate of return on investment to the corporation's shareholders and advance economic development in Iowa. The corporation provides financing for a broad range of business capital needs. Financing may be in the form of equity participation, loans with stock purchase warrants, royalties, etc., and is tailored to the particular business situation. Investments generally range from \$50,000 to \$1 million, with the average expected to be approximately \$250,000.



For more information on this program, contact:

Mr. Jude Conway
Capital Management Associates

Phone: (515) 288-9110

Iowa Department of
Economic Development

Phone: (515) 242-4827

Iowa Seed Capital Program

The Iowa Seed Capital Corporation (ISCC) is a State-funded seed capital fund that invests in start-up companies in Iowa that are bringing new and innovative products and processes to the marketplace. Since its creation in 1983, the ISCC program has produced more than \$10,000,000 in investment commitments to entrepreneurial companies in Iowa. The ISCC selects only a handful of innovative projects a year, with less than 2% of the inquiries received likely to gain financial support. Those companies that do gain funding are generally those that have strong management capabilities and a clear, rational vision of their products, their potential market, their competition, and their funding requirements articulated in a clearly-written business plan.



For more information on this program, contact:

Iowa Seed Capital Corporation

Phone: (515) 242-4860

Entrepreneurs With Disabilities (EWDI)

This program is a collaborative effort of the Department of Education, Division of Vocational Rehabilitation Services, Department for the Blind, and the Department of Economic Development. The program provides financial and/or technical assistance to qualified individuals with disabilities seeking self-sufficiency by establishing, maintaining, expanding, or acquiring a small business. Program services include:

- Financial assistance for the purpose of purchasing business equipment, supplies, inventory, rent or other start-up, expansion or acquisition costs identified in an approved business plan. Total financial assistance provided to an individual from the program shall not exceed 50% (up to \$15,000) of the financial package. Consideration for financial assistance requires submission of a business plan.
- Technical assistance provided by a consultant(s) for any specific business-related services, such as business plan development, accounting, legal services, etc.



For more information on this program, contact:

Iowa Department of Economic Development

Phone: (515) 242-4700 or (800) 245-IOWA

E-mail: SmartState@ided.state.ia.us

Pollution Control Property Tax Exemption

Since 1970, certain pollution control equipment has been eligible for a property tax exemption. Improvements to real property that are primarily used to enhance the State's air quality may qualify. An application must be filed for an exemption. There is no minimum/maximum amount eligible for the exemption.



For more information on this program, contact:

Dean Peterson

Iowa Department of Natural Resources

Phone: (515) 242-5100

Iowa Economic Development Loan Program

Through the sale of tax-exempt bonds, the Iowa Finance Authority can provide financing to new and expanding businesses. The maximum loan is \$10 million. Rates vary depending on the market. Applications are taken on the first day of the calendar year. As of June 1997, \$31.5 million is available for loans under this program.



For more information on this program, contact:

Iowa Finance Authority

Phone: (515) 242-4990

Focused Small Business Loan Program

This newly created program, offered by the Iowa State Treasurer's Office, is open to any small business owned and operated by women, minorities, and/or individuals with disabilities. The Focused Program succeeds the former "Linked Investment for the Future Program." Like the Linked Investment Program, it enables targeted companies to shop for low interest loans. The maximum loan is \$100,000 (there is no minimum), and loan rates are updated every month.



For more information on this program, contact:

Investment Division of the State Treasurer's Office

Phone: (515) 281-3287

Export Trade Assistance Program (ETAP)

The State of Iowa offers financial assistance to Iowa companies who wish to take advantage of international trade shows and trade missions to enter new markets. Through the Export Trade Assistance Program (ETAP), the International Division of the Iowa Department of Economic Development will reimburse 75% of a company's direct expenses up to \$4,000 per pre-approved event. Eligible expenditures include booth space rental, construction, equipment and/or furniture rental and utility costs. Freight costs of equipment and/or exhibit materials to and from show are also funded. To be eligible to participate in ETAP, applicants must meet the following criteria:

- Employ fewer than 500 individuals;
- At least 75% of applicant's total number of employees must be employed within Iowa;
- Exhibit products or services or samples of Iowa manufactured, processed or value-added products or agricultural commodities in conjunction with a foreign trade show or trade mission;
- Have at least one full-time employee or sales agent participate in the event.

Utilization of the ETAP funds shall be limited to three events per State fiscal year, including a maximum of two trade shows. ETAP applications must be submitted well in advance of the event to allow ample time for application review and contract preparation. Successful applicants will be funded on a first-come, first-served basis to the extent funds are available.



For more information or an application, contact:

Iowa Department of Economic Development

International Division

Phone: (515) 242-4743

Iowa New Jobs Training Program/Financing

An employer may be reimbursed up to 50% of new employees' wages for on-the-job training. All training is customized to the company's special needs. Companies creating new jobs which are engaged in manufacturing, assembling products, conducting research and development, or providing interstate services are eligible. Community colleges finance the program by the sale of tax-exempt bonds which are repaid by the tax revenue generated by the salaries and capital invested to support the new jobs. As a result company profits are not used to repay the bonds. Iowa has 15 community colleges, three major State universities, and many private colleges and competent professional societies that can provide business and industry training assistance as the programs are developed. Other job training financing options include:

- **Supplemental New Jobs Credit From Withholding:** This program is designed to create high-quality jobs by doubling the withholding credit for companies participating in the Iowa New Jobs Training Program. Starting wages must be at least the county average or regional average wage, whichever is lower. Eligibility for the credit is based on a one-time determination by the community college of the starting wage.
- **New Jobs Tax Credit:** Businesses entering into an agreement under the State's training program, and increasing their workforce by at least 10%, may qualify for this credit to their Iowa corporate income tax. This credit is equal to 6% of the State unemployment insurance taxable wage base. The credit for 1997 is \$912 per new employee. The tax credit can be carried forward up to 10 years.
- **Workforce Development Fund:** Programs under this fund provide training for new and existing employees and include (1) Iowa Jobs Training, (2) Business Network Training, (3) Targeted Industries Training, and (4) Innovative Skills Development.



For more information on this program, contact:

Iowa Department of Economic Development

Phone: (515) 242-4700

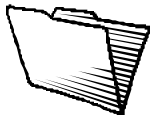
Or, consult a community college economic developer.

Technical Assistance Programs for Manufacturers



The Iowa Energy Center

The mission of the Iowa Energy Center (IEC) is to cost-effectively reduce Iowa's dependence on imported fuels by increasing the use of energy-efficient technologies and renewable resources. The center has established an array of energy-related programs and research projects that address economic, environmental, and educational issues. The Center's work also helps increase the value of products and services produced in Iowa. In this way, the IEC is working to provide Iowans, including businesses, with practical information that can be used to make positive, cost-effective changes in their communities.



For more information on this program, contact:

Adriene Koett-Cronn

Iowa Energy Center

Phone: (515) 294-8819

E-mail: adriene@iastate.edu

Professional Site Location/Expansion Services, Resources and Confidential Consultation for Growing Companies

The Iowa Department of Economic Development (DED) provides expanding companies with many valuable services designed to streamline the site location process. DED confidential services include:

- Working on a confidential basis with companies to determine project needs;
- Providing data and information on available buildings, sites, and communities;
- Coordinating community/site visits;
- Packaging appropriate financial assistance and job training programs;
- Serving as a liaison with State environmental permitting officials.



For more information on this program, contact:

Iowa Department of Economic Development

Phone: (515) 242-4750

E-mail: SmartState@ided.state.ia.us

Regulatory Assistance Program

The Regulatory Assistance Program helps manufacturers by advising and assisting them in the preparation and submission of permit applications with the Iowa Department of Natural Resources (DNR) and other Iowa regulatory agencies. The mission of the Regulatory Assistance Program is to facilitate communication between the business and regulators, and to expedite the permitting process. The Iowa Department of Economic Development (DED) also has personnel available to assist small businesses with Air Quality Regulations. DED understands how overwhelming some regulations may be to small businesses. A liaison is available to work exclusively with small businesses to answer questions regarding air quality regulations.



For more information on this program, contact:

Iowa Department of Economic Development

Phone: (515) 242-4750 or (800) 245-IOWA

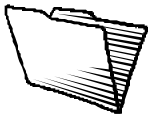
E-mail: SmartState@ided.state.ia.us

Iowa Department of Natural Resources

Phone: (515) 281-8941

Iowa Procurement Outreach Center (IPOC)

IPOC assists businesses in competing for Federal Government contracts. IPOC can also assist businesses with expanding their markets. In addition, IPOC can research the market potential of a company's product in the Federal Government marketplace and can obtain information about 15 million items the Government buys on a regular basis. IPOC can also provide copies from their microfilm library of over 50,000 Federal military and industrial specifications, help locate bar coding suppliers, review bid documents, provide information about contract administration, and provide general consulting to help businesses understand the entire procurement process.



For more information on available contracts, contact:

Iowa Department of General Services

Phone: (515) 281-5982



For more information on IPOC, contact:

Bruce Coney

E-mail: bconey@ided.state.ia.us

Iowa Procurement Outreach Center

Phone: (800) 458-4465

Center for Industrial Research and Service (CIRAS)

Iowa manufacturers can call on CIRAS for help in handling problems in areas such as management, production, marketing, engineering, finance, technology, and disaster planning and recovery. CIRAS helps bring firms into contact with the person, organizations, and agencies that can help provide solutions. CIRAS is an industrial arm of the University Extension Program at Iowa State University.



To obtain assistance, contact:

CIRAS

Phone: (515) 294-3420

Or, contact a county extension education director.

Iowa Manufacturers Technology Center (MTC)

The Iowa Manufacturing Technology Center (MTC) is a single point of contact to identify problems, answer questions, identify resources or explore options. Field agents are located throughout the State. Each can bring tools to conduct formal assessments of needs, develop plans, and set up delivery of services to meet those needs. The Iowa MTC will assist in modernizing facilities, upgrading processes and improving workforce capabilities through the use of effective training and skill development. At the request of Iowa manufacturing businesses, Iowa MTC staff access technical resources at local community colleges, State universities, Federal laboratories and other public and private-sector organizations in the State.



For more information on this program, contact:

Iowa MTC

Phone: (515) 965-7125

E-mail: iowamtc@exnet.iastate.edu

Michigan



Financial Assistance Programs for Manufacturers

Tax-Free Renaissance Zones

Michigan's Tax-Free Renaissance Zones are 11 regions in the State designated virtually tax free for any business or resident presently in or moving to a zone. Each Renaissance Zone can be comprised of up to six smaller zones (sub zones) which are located throughout the community to give businesses more options on where to locate.

Renaissance Zones waive the following local and State taxes:

- Michigan Single Business Tax
- Michigan's 6-mill State Education Tax
- Local Personal and Real Property Tax
- Michigan Personal Income Tax
- Local Income Tax
- Utility Users Tax

These taxes represent nearly all State and local taxation on a Michigan business. A business would only pay unemployment insurance, social security taxes, workers' compensation, and sewer and water fees, all of which are either Federal taxes or fees for service. Businesses would also pay property taxes which result from local bonded indebtedness or special assessments so as not to jeopardize the community's current bonds. Businesses would also pay Michigan's 6% sales tax. Michigan does not allow local sales taxes. Current Renaissance Zones are:

Benton Harbor/St. Joseph/Benton (120 acres/10 years)	Gogebic/Ontonagon/Houghton (2,917 acres/15 years)
Detroit (1,345 acres/12 years)	Flint (836 acres/15 years)
Grand Rapids (536 acres/15 years)	Lansing (110 acres/12 years)
Manistee County (556 acres/15 years)	Saginaw (743 acres/12 years)
Montcalm/Gratiot Counties (1,870 acres/15 years)	(Former) Warren Tank Arsenal (153 acres/15 years)
(Former) Wurtsmith Air Force Base (2,202 acres/15 years)	

All Tax-Free Renaissance Zones began on January 1, 1997. If a business moves into a 15-year zone in the year 2000, it has 12 years of tax-free status remaining.



For more information on this program, contact:

Michigan Jobs Commission

Phone: (800) 94-NoTax or (517) 373-9808

Business and Industrial Development Corporations (BIDCOs)

BIDCOs are State-chartered private lending institutions designed to help businesses that conventional lenders consider too risky but that do not exhibit the high-growth potential required by venture capitalists. BIDCOs offer an array of business financing options, including debt, equity, and combinations of the two. Michigan BIDCOs also can provide management assistance to help businesses grow. They may finance out-of-state firms only if the primary economic impact will be in the State in Michigan. Michigan offers the following BIDCOs:

- “Access BIDCO” provides debt and equity financing for established service, manufacturing, distribution, and retail businesses in Michigan. Access uses combinations of subordinated debt and commercial bank loans to lower the cost of capital. The minimum financing level is \$200,000. For packages exceeding \$450,000, Access acts as the lead investor, while working with other financing sources to engineer a solution. To qualify, businesses should have most of the following characteristics: (1) be an established business, (2) have growth potential, (3) represent an unusual investment opportunity, (4) possess a strong management, (5) be flexible in allocating resources and (5) have product and marketing capabilities.
- “Arcadia BIDCO” serves the financing needs of a broad base of established manufacturing and service companies. Arcadia’s primary market is southwestern Michigan, although it will participate in investment groups throughout the State. Arcadia prefers to help low- to medium-technology companies with at least two years operating history and substantial growth opportunities. Start-ups will not be considered unless a business presents an outstanding opportunity and is headed by proven management. Financing ranges from \$200,000 to \$600,000 and includes equity, debt with equity features, and royalty participation.
- “Capital BIDCO” serves a statewide market but emphasizes Muskegon, Grand Rapids, Lansing, Flint, and the Tri-Cities. Capital favors firms with high growth potential and acquisitions in the manufacturing and service sectors having annual sales between \$1 million and \$25 million.
- “Discover BIDCO” focuses on marketing and sales expansion programs for service and manufacturing firms operating at a break-even or small profit margin. Its primary market is western Michigan. Financing ranges from \$50,000 to \$150,000. Candidates are companies with two or three years operating history, sales in the \$400,000 to \$2.5 million range and the potential for further profitable growth. Discovery also will finance up to 50% of the initial franchise and start-up fees for acquiring and operating proven franchises.

- “Greater Detroit BIDCO” is the first minority-owned BIDCO. It provides financial and management assistance to businesses located within 100 miles of its Detroit office. Greater Detroit targets small firms that are good prospects for growth in employment, sales and profits; it considers an array of industries, such as healthcare, food service, the automobile sector, and business and consumer services. Minorities receive preference. Financing ranges from \$50,000 to \$400,000.
- “Great Lakes BIDCO,” which operates statewide, finances profitable companies seeking to expand their markets by developing or enhancing products or exporting. Prime candidates are growth-oriented companies having sales of \$1 million or more. Great Lakes offers financing beginning at \$250,000. That financing may be structured as debt with a yield enhancement, such as royalties or the option to acquire stock.
- The “Jackson BIDCO” finances small and medium-sized businesses in central Michigan. It targets firms developing new products or expanding to meet market demand for existing products and services. Applicants should have two or more years of operating history, as well as substantial potential for growth and profits. In most cases, Jackson BIDCO provides a combination of debt and equity-based financing in the range of \$150,000 to \$350,000.
- “Liberty BIDCO” provides financing ranging from \$50,000 to \$600,000 in a combination of debt and equity to small and medium-sized businesses in Michigan. Viable candidates should be profitable or nearly profitable and have management experience, two or more years of operating history, and a predictable cash flow.
- “North Coast BIDCO” makes relatively high-risk capital available to firms in Michigan’s Upper Peninsula. North Coast offers working capital loans, gap financing, subordinated debt, equity, and seed capital loans ranging from \$30,000 to \$250,000. Equity may include combinations of royalties and warrants. North Coast looks for firms that have (1) accepted products or services, (2) demonstrated potential employment growth and profitability and (3) a complete business plan.
- “Northern Michigan BIDCO” provides capital and business consulting services to firms in or planning to relocate to northern Michigan. All sectors are eligible. Northern Michigan structures investments as loans, equity investments, or profit participation. The minimum lending rate is 2% over the *Wall Street Journal* prime. Business plans are preferred but not required.
- “Onset BIDCO” focuses on businesses providing products, capital equipment, or services to manufacturing companies. Onset primarily serves the area from Saginaw south to the Ohio border, and as far west as Lansing. Candidates for financing must be innovative, growing companies that are at least two years old, operate at a break even profit and have sales in excess of \$500,000. The range of financing is \$250,000 to \$1 million.



For more information on this program, contact:

Michigan Jobs Commission

Phone: (517) 373-7550

Or, contact the following BIDCOs directly:

Access BIDCO, Inc.	(517) 374-2521
Arcadia BIDCO Corporation	(616) 324-4880
Capital BIDCO, Inc.	(517) 323-7772
Discovery BIDCO, Inc.	(616) 235-4796
Great Lakes BIDCO, Inc.	(313) 626-6070
Greater Detroit BIDCO, Inc.	(313) 962-4326
Jackson BIDCO, Ltd.	(517) 784-5556
Liberty BIDCO Investment Corp.	(313) 352-9660
North Coast BIDCO, Inc.	(906) 228-6080
Northern Michigan BIDCO, Inc.	(906) 635-9794

Capital Access Program (CAP)

The Capital Access Program (CAP) allows banks to make business loans that are somewhat riskier than conventional bank loans. It uses a small amount of public resources to generate a large amount of private bank financing, thus providing funds to many Michigan businesses that may otherwise not be able to obtain necessary financing. The program utilizes a special loss reserve to assist banks in covering losses from a portfolio of loans that a bank makes under the program. The program is very broad based and can be used to finance most types of Michigan businesses, including manufacturers. One-time premium payments, which range from 3% to 7% of the amount borrowed, help to fund the special loss reserve. Therefore, while the loans under the program are generally more expensive than conventional bank loans, the program does allow banks to provide access to bank financing for many businesses that otherwise might not qualify for conventional loans. Potential borrowers should contact their local bankers, since loans under the program are private transactions between the bank and the borrower. The Michigan Jobs Commission plays no role in the lending decision. While the program may enable a bank to take more risk than normal, it is still the bank that bears the risk and is responsible for the lending decision. While there is no minimum/maximum loan amount, the average loan is approximately \$50,000. Fee range from 3% to 7% of the total loan amount over and above the bank's interest rate.



For more information on this program, contact:

Michigan Jobs Commission

Phone: (517) 373-7550

Michigan



Technical Assistance Programs for Manufacturers

Industrial Technology Institute (ITI)

The Industrial Technology Institute (ITI) is an independent organization that partners with Federal and State Government entities, private enterprise, and industry organizations to assist manufacturers in increasing productivity, quality, and customer satisfaction. The Institute carries out applied research and pilot activities on such manufacturing issues as optics and lighting for machine vision, productivity benchmarking, electronic commerce, supply chain optimization, and artificial intelligence for factory-floor scheduling and logistical systems. These activities are funded through contracts with large manufacturers, government agencies, and industry trade associations. In addition, ITI provides direct assistance to small and medium-sized manufacturers (those with less than 500 employees) through the Michigan Manufacturing Technology Center (MMTC), the Performance Benchmarking Service, Pathway Partners, Ltd., and the Energy and Environment Center (see below).

ITI is a multi-disciplinary organization with broad knowledge in applying new manufacturing technology and business practices, and has particular expertise in several areas:

- Supply chain optimization;
- Business process re-engineering;
- Electronic commerce;
- Financial solutions;
- Quality management;
- Energy and environmental services;
- Performance benchmarking;
- Inspection and process control.



For more information on the ITI and its programs, contact:

Colleen Durocher

Industrial Technology Institute

Phone: (800) 292-4484

E-mail: inquiry@iti.org

Michigan Manufacturing Technology Center (MMTC)

The Industrial Technology Institute (ITI) established the Michigan Manufacturing Technology Center (MMTC) in 1991. The MMTC works with manufacturers in planning, implementing, and measuring improvements to their products and processes, including technical and workforce issues, in order to achieve increased profits, higher quality, and lower costs. The MMTC has statewide coverage through affiliate relationships with organizations in Grand Rapids, Saginaw, Traverse City, and Marquette, with each regional office serving as a service provider for its particular geographic area. The MMTC is organized as one of six operating units of ITI, and is the largest in terms of revenue and number of employees. The Michigan Manufacturing Technology Center (MMTC) is one of 78 Manufacturing Extension Partnership (MEP) sites nationwide sponsored by the U.S. Department of Commerce through the National Institute of Standards and Technology (NIST) program. The MMTC works with Michigan's small and medium-sized manufacturers who want to increase their competitive status by achieving higher quality, increasing productivity, reducing manufacturing costs, and eliminating waste.



For more information on this program, contact:

Bonnie Burcaw

Phone: (313) 769-4065

Or, contact the **Industrial Technology Institute**

Phone: (800) 292-4484

E-mail: kee@iti.org

Performance Benchmarking Service

The Performance Benchmarking Service benchmarks manufacturing plants. A company completes one of the Service's 10 user-friendly questionnaires and receives a customized report comparing it to similar plants on: sales growth, productivity, schedule integrity, delivery, scrap and rejects, computer use, and more than 30 other measures. The Service queries its database of 2,000 plants and custom-selects a set of 25 or more that fit the client's industry-price-volume-activity profile.

Customized benchmarking reports can be generated for any manufacturing plant. Most of the 3,400 reports that the Service has produced since its launch in 1992 have been commissioned on behalf of manufacturing companies by field agents of the 78 outreach centers affiliated with the National Institute for Standards and Technology (NIST). The 30 Industrial Resource Assistance Program (IRAP) centers of Canada's National Research Council also regularly commission reports on behalf of their clients and prospects. However, several hundred companies a year also order reports directly.

The staff of the Performance Benchmarking Service start with a company's responses to a simple questionnaire and provides a customized report that compares the respondent to other manufacturing plants in similar businesses on more than 40 key performance measures. The 25-page company report compares the respondent's performance against a custom-selected group of firms that are similar in product line, customer base, piece price, and order volume. Topics included:

- Design/engineering
- Scheduling/delivery
- Use of computer technology
- Quality methods
- Manufacturing/production
- Machine utilization
- Inspection and gaging
- Workforce/productivity



For more information on this program, contact:

Industrial Technology Institute

Phone: (800) 292-4484

E-mail: inquiry@ iti.org

Pathway Partners, Ltd.

Pathway Partners is staffed by experienced advisors for complicated financial transactions, including:

- Mergers and acquisitions
- Management buyouts
- Corporate divestitures
- Joint ventures
- Growth financing

Financial advisory services include needs assessment, preparation of proposals, and assistance in negotiating and closing transactions, which can range from helping companies obtain bank loans and equipment leases to arranging complex mezzanine and venture capital financing.

Pathway Partners can also put together mergers, acquisitions, and strategic partnerships.



For more information on this program, contact:

Pathway Partners, Ltd.

Phone: (313) 769-4491 or 4258

E-mail: jdb@iti.org

ITI Energy and Environmental Center

The Industrial Technology Institute, an independent technology consulting organization, is committed to improving American manufacturing performance by providing R&D and technical assistance services to manufacturers. The Energy and Environment Center help firms reduce energy costs and minimize environmental waste. Since 1988, the Center has helped manufacturers find opportunities to save an average of 15% on annual energy bills. The Center's target areas include:

- High-efficiency motors
- Compressed air systems
- Heating, ventilation and air conditioning systems
- Lighting
- Rate Structures



For more information on this program, contact:

Colleen Durocher

ITI Energy and Environment Center

Phone: (800) 292-4484

Michigan Small Business Development Centers

Located throughout Michigan, Michigan Small Business Development Centers (SBDC) assist people interested in starting their own business with the development of a business plan, market planning, site selection, financial projections, and licensing requirements. Some of the products available to a new entrepreneur include:

- Business Planning Series, a three-part series of guides which present the essential elements of a winning business plan, offer expert cash flow and control tips and outline no cost/low cost marketing methods to increase sales and expand customer base.
- Financing Your Business answers questions on how to manage cash flow, how to choose an investment for excess cash flow, and how to obtain a loan.
- Starting Your Business provides practical, how-to information for those needing a basic overview of the key elements of starting a business in Michigan.



For more information, contact a local SBDC:

Alpena

Alpena Community College
Phone: (517) 356-9021 x296

Detroit

Wayne State University
Phone: (313) 577-4850

Grand Rapids

Grand Valley State University
Phone: (616) 771-6693

Kalamazoo

Kalamazoo College
Phone: (616) 337-7350

Mt. Clemens

Macomb Co. Bus. Assistance Ctr.
Phone: (810) 469-5118

Saginaw

Saginaw Valley State
Phone: (517) 790-4048

Traverse City

Traverse Bay Economic
Development Corporation
Phone: (616) 946-1596

Ann Arbor/Saline

Washtenaw Community College
Phone: (313) 944-1016

Flint

Com. Capital & Development Corp.
Phone: (810) 239-5847

Houghton

Michigan Technological University
Phone: (906) 487-1245

Lansing

Lansing Community College
Phone: (517) 483-1921

Mt. Pleasant

Central Michigan University
Phone: (517) 774-3270

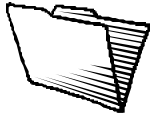
Troy

Walsh College
Phone: (810) 952-5800

International & National Business Development

The International and National Business Development (INBD) Office is responsible for promoting exports of Michigan-produced goods and services as well as stimulating investment in Michigan by out-of-state and foreign-based firms. INBD's attraction staff provide free, confidential help in the areas of site location, financial assistance, job training and in the coordination of resources and services. INBD account managers work with utilities, associations and local economic development agencies to best match business needs with Michigan opportunities. INBD also sponsors investment seminars in targeted cities and participates in select trade shows. In addition, INBD assists Michigan exporters by:

- Coordinating export assistance services with economic developers and trade associations.
- Providing referrals to public/private marketing organizations statewide.
- Compiling and produces export directories.
- Conducting trade seminars.
- Delivering export assistance, including direct company support; agent, importer and distributor search and qualification, joint venture search and qualification, advertising through foreign offices. Some of these services are offered on a fee basis.

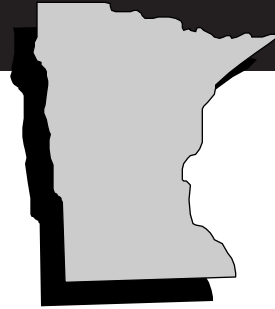


For more information on this program, contact:

Michigan Jobs Commission

Phone: (517) 373-7550

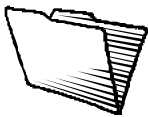
Minnesota



Financial Assistance Programs for Manufacturers

Capital Access Program (CAP)

In an effort to foster economic development, the Capital Access Program (CAP) encourages private lending institutions to make loans to businesses, particularly small and medium-sized businesses, including manufacturers. The terms of all loans are negotiated between the borrower and the lender. A fund created by the lender, the borrower, and the State affords the lender a high degree of protection. To encourage participation, CAP allows the lender/borrower contribution to the fund to be financed as part of the loan. They contribute between 3% and 7% of the loan amount to the loan fund; the two portions must be equal.



For more information on this program, contact:

Paul Moe

Minnesota Department of Trade and Economic Development

Phone: (612) 297-1391 or (800) 657-3858

E-mail: dted@state.mn.us

Enterprise Zone Program

The Enterprise Zone Program is designed to provide income tax credits to businesses in select communities. The types of tax credit that businesses can receive include property tax credits, debt financing credit on new construction, sales tax credit on construction equipment and materials, and new or existing employee credits. The only businesses not eligible for the program are recreation or entertainment facilities, companies owned by a fraternal or veteran's organization and those owned by public utilities or financial institutions. Qualifying businesses must create investment, development, job creation, or retention in the designated areas.

Enterprise Zones in Minnesota:

- Breckenridge
- Dilworth
- East Grand Forks
- Moorhead
- Ortonville
- Duluth



For more information on this program, contact:

Louie Jambois

Minnesota Department of Trade and Economic Development

Phone: (612) 297-3172 or (800) 657-3858

E-mail: dted@state.mn.us

Urban Challenge Grant Program

The Urban Challenge Grant Program focuses on providing assistance to businesses located in inner-city or low-income areas. By teaming with local nonprofit organizations, the program serves those companies striving to create jobs for low-income people. The program also steers businesses to management, training, and technical assistance as needed. Businesses may use loan proceeds for start-up and expansion costs, including normal expenses such as machinery and equipment, inventory and receivables, working capital, new construction, renovation, and site acquisition. Refinancing of existing debt is not permitted. The maximum total loan available is \$300,000, and the interest rate can range between 2% and 10%. Applications for financial assistance are made through the program's nonprofit partners who are required to provide a dollar-for-dollar match to the loan. Since the program began in 1995, 110 loans totaling more than \$2.3 million have been provided by the Department of Trade and Economic Development. The department can refer an entrepreneur to the appropriate nonprofit in his or her area. Businesses located in the following cities are eligible for assistance:

- Minneapolis
- St. Paul, Hopkins
- Columbia Heights
- Hilltop
- South St. Paul
- West St. Paul
- St. Anthony
- Mendota
- Lauderdale



For more information on this program, contact:

Mark Gustafson

Department of Trade and Economic Development

Phone: (612) 296-9090 or (800) 657-3858

E-mail: mgustafs@dted.state.mn.us

Small Business Development Loan Program

Creating jobs and providing loans for business expansions are the goals of the Small Business Development Loan Program. The program operates in conjunction with the Minnesota Agricultural and Economic Board, which makes small business loans through the issuance of industrial development bonds that are backed by a State-funded reserve of 25%. Generally, 20% of a project's costs must be privately financed through equity or other private sources. The program focuses on manufacturing and industrial businesses located in Minnesota or those intending to locate in the State. Eligible businesses are generally those with 500 or fewer employees. Loans can be used for acquisitions, building construction and renovation and other development costs. Loans range from \$250,000 to \$4 million.



For more information on this program, contact:

Paul Moe

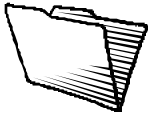
Minnesota Department of Trade and Economic Development

Phone: (612) 297-1391 or (800) 657-3858

E-mail: dted@state.mn.us

Working Capital Loan Guarantee Program

The Minnesota Export Finance Authority (MEFA) operates an export Working Capital Loan Guarantee program. The Working Capital Loan Guarantee Program can assist Minnesota exporters in funding the production of goods or services for which they have received orders. These goods or services have to be delivered outside the United States. This program provides transaction-based loan guarantees of up to 90% of bank loans between \$25,000 and \$250,000.



For more information on this program, contact:

Norr Doja

MEFA

Phone: (612) 297-4658 or (800) 657-3858

Minnesota Investment Fund

The Minnesota Investment Fund awards grants to local units of government, including cities, counties, townships, and Indian tribal governments, which then make loans to assist new or expanding Minnesota businesses with a focus on manufacturing and technological and professional services. At least 50% of total project costs must be privately financed through owner equity and other lending sources. Most applications selected for funding typically have had at least 70% private financing. Interest rates are negotiated by the business and the local government unit. All projects must meet a minimum score based on private investment and the number of quality jobs created or retained.



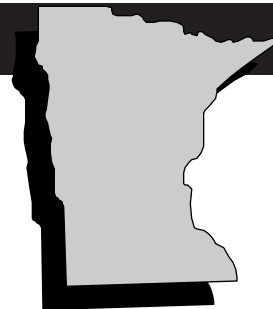
For more information on this program, contact:

Minnesota Department of Trade and Economic Development

Business and Community Development Division

Phone: (612) 296-5337

Minnesota



Technical Assistance Programs for Manufacturers

Small Business Development Centers

Small Business Development Centers provide counseling to small businesses throughout the State on topics like business planning, capital formation, financial projections and loan packaging, accounting and record keeping, market research and analysis, process improvement, technology transfer, exporting, procurement, and Small Business Innovation Research. Counseling is customized to meet the needs of the client, and may be provided by staff or private sector counselors. Small Business Development Centers also sponsor training programs on topics like environmental compliance, employment issues, access to capital, implementation of quality processes, job costing, procurement, international trade, business planning, and taxation. Training programs frequently are co-sponsored with colleges and universities, local civic and service organizations, chambers of commerce, and State and Federal agencies.

Additionally, Small Business Development Centers target existing small companies in industries with demonstrated potential for economic growth. Initial consultations may be provided to small business owners in other industries; these individuals may be referred to more appropriate sources for further assistance. Individuals who are considering starting a business are encouraged to attend a pre-business workshop and develop a preliminary business plan before meeting with a counselor. Small Business Development Centers provide counseling at no charge. A modest fee is charged for most training programs, to cover costs. Fees may be charged for specialized services. Further information may be obtained from a Small Business Development Center counselor.



For more information on this program, contact:

Minnesota Department of Trade and Economic Development

Phone: (612) 297-5770 or (800) 657-3858

E-mail: dted@state.mn.us

Applicants may also call the following Small Business Development Centers:

Northeast Minn. Small Business Development Center — Duluth

University of Minnesota

Phone: (218) 726-6192

Regional Subcenters:

Itasca Development Corporation — Grand Rapids

Phone: (218) 327-2241

Rainy River Community College — International Falls

Phone: (218) 285-2255

Hibbing Community College

Phone: (218) 262-6703

Ely/Two Harbors

Phone: (218) 726-6192

Olcott Plaza Office Building — Virginia

Phone: (218) 741-4251

North Central Minn. Small Business Development Center — Brainerd

Central Lakes College

Phone: (218) 828-5302 or (800) 247-2574

Regional Subcenter:

Pine Technical College — Pine City

Phone: (320) 629-7340

Northwest Minn. Small Business Development Center — Moorhead Region

Moorhead State University

Phone: (218) 236-2289

Regional Subcenter:

Northwest Technical College — Bemidji

Phone: (218) 755-4286

Central Minn. Small Business Development Center — St. Cloud

St. Cloud State University

Phone: (320) 255-4842

Southwest Minn. Small Business Development Center — Marshall

Southwest State University

Phone: (507) 537-7386

South Central Minn. Small Business Development Center — Mankato

Region Nine Development Commission

Phone: (507) 389-8863

Southeast Minn. Small Business Development Center — Rochester

Rochester Community College

Phone: (507) 285-7536

Regional Subcenters:

Owatonna Incubator Inc.

Phone: (507) 451-0517

Pottery Business and Technology Center — Red Wing

Phone: (612) 338-4079

Southeast Minnesota Development Corporation — Rushford

Phone: (507) 864-7557

Twin Cities Metro Area Small Bus. Development Center — Minneapolis

University of St. Thomas

Phone: (612) 962-4500

Regional Subcenters:

Normandale Community College — Bloomington

Phone: (612) 832-6560

Hennepin Technical College — Plymouth

Phone: (612) 550-7218

Dakota Technical College — Rosemount

Phone: (612) 423-8262

Northeast Metro Technical College — White Bear Lake

Phone: (612) 779-5764

Business Development and Site Selection Services

For businesses interested in expanding or relocating to a Minnesota site, the Business Development and Site Location Services serves as a bridge between government and the resources that businesses seek. Business Development Specialists act as liaisons between businesses and State and local government to access financial and technical resources. The program also serves as an important information source, providing businesses with data on topics ranging from the availability of buildings and property or the labor supply in a particular location, to transportation or tax comparisons. The one-on-one nature of this program assists businesses throughout every phase of their expansion or location projects.



For more information on this program, contact:

Minnesota Department of Trade and Economic Development

Phone: (800) 657-3858 or (612) 297-1291

E-mail: dted@state.mn.us

Minnesota Trade Office Services

The Minnesota Trade Office helps companies develop their export markets by providing (1) export education and training, (2) comprehensive international business counseling on market and industry opportunities, (3) market awareness through industry directory production and dissemination, international direct mail promotions, trade show support, and media relations activities, (4) information resources through the international business library, (5) assistance in developing distributorships and joint ventures through trade show and trade mission coordination, and (6) export finance and loan guarantee assistance through the Minnesota Export Finance Authority (MEFA). MEFA offers four major programs for Minnesota businesses:

- The Receivable Insurance Program assists exporters in getting coverage against nonpayment of overseas open-account sales.
- The Counseling and Training Program provides individual assessment, problem resolution and training on financing-related issues.
- The Agency Liaison Program helps businesses access various Federal agencies and international development banks that have financing and procurement opportunities.

The Minnesota Trade Office publishes a select group of publications for Minnesota exporters wishing to learn more about these programs.



For more information on this program, contact:

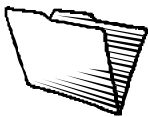
Minnesota Trade Office

Phone: (612) 297-4222 or (800) 657-3858

E-mail: dted@state.mn.us

Computer and Electrical Components Industry Services

These services foster the growth of jobs, revenue, and investment in Minnesota's computer and electrical components industries. Computer and Electrical Components Industry Specialists provide information to businesses on financing, suppliers, business planning, trade opportunities, and venture partners. The specialist also actively markets Minnesota in response to inquiries and at industry gatherings.



For more information on this program, contact:

Diane Knutson

Minnesota Department of Trade and Economic Development

Phone: (612) 296-6076 or (800) 657-3858

E-mail: dted@state.mn.us

Forest Products Industry Services

This program fosters the growth of jobs, builds added value in Minnesota's wood processing industry, and attracts new industry consistent with environmental protection. Forest Products Industry Specialists provide information to businesses on financing, suppliers, business planning, trade opportunities, and venture partners. The specialist can also provide information on topics ranging from wood resources and markets to technologies and building sites. Specialists represent the industry and the Department of Trade and Economic Development by reviewing projects, organizing statistical data, participating in development efforts, and helping to coordinate demonstration projects like model homes.



For more information on this program, contact:

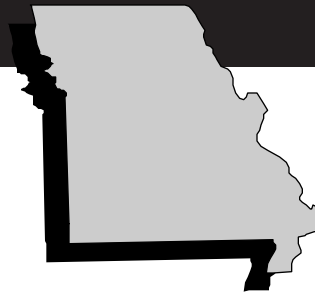
Dentley Haugesag

Minnesota Department of Trade and Economic Development

Phone: (612) 297-1174 or (800) 657-3858

E-mail: dted@state.mn.us

Missouri



Financial Assistance Programs for Manufacturers

Missouri Department of Economic Development Finance Program

The Finance Program assists industrial and commercial development in Missouri by rewarding small businesses and their investors with tax credits. Through tax increment financing, local jurisdictions retain larger portions of their property and sales taxes to use for development projects. The Department of Economic Development (DED) makes capital tax credits available for investors in small businesses. The State provides a 30% income tax credit to the investors based on their investment in approved businesses. Investors must have less than 50% stock ownership in the qualified business. Eligible investments include manufacturing, processing, assembly, research and development in firms that have fewer than 100 employees and less than \$500,000 annual revenue. Recipient firms also must be headquartered in Missouri. Investment per business eligible for tax credits ranges from \$5,000 to \$500,000. DED provides two additional tax credit programs designed to assist manufactures:

- DED's Development Tax Credit Program provides a method to lower the cost of machinery for a new or expanding industry by providing 50% tax credits to a contributor. The contribution funds can be used to purchase new machinery and equipment to be leased to the industry at a competitive rate.
- DED's Brownfield Redevelopment program provides tax credits for up to 100% of the cost of remediation of contaminated properties. Loan and grant funds are also available to fund other redevelopment costs.



For more information on this program, contact:

Missouri Department of Economic Development Finance Program

Phone: (573) 751-0717 or (800) 523-1434

Capital Access Loans (CAP)

The Department of Economic Development (DED) provides subordinated Action Fund Loans to manufacturing companies when needed to complete a financing package. Loans can be used for the purchase of machinery, equipment, and working capital. Additionally, DED's Interim Financing Loans provide short-term deferred payment loans to industries that need assistance to make a project feasible. DED' makes these loans possible through its Capital Access Program (CAP). CAP provides a loss reserve pool to help lenders make higher-risk loans.



For more information on this program, contact:

Missouri Department of Economic Development

Phone: (573) 751-4241 or (800) 523-1434

Environmental Improvement and Energy Resources Authority Market Development Program

The Environmental Improvement and Energy Resources Authority (EIERA), a division of the Department of Natural Resources, promotes the development of markets for recovered materials. An interagency agreement between the Departments of Natural Resources and Economic Development governs the fund. The program provides loans of up to \$75,000 for equipment that enables the recovering and recycling of materials. If loan criteria are met in a three-year period, the loan is forgiven and repayment not required. The authority also provides low-interest bond financing for projects that would reduce, control, and prevent damage to the environment and encourage research and development of alternative energy sources and facilities. The program finances between eight to 15 projects per year since its inception in 1990.



For more information on this program, contact:

EIERA Market Development Program

Missouri Department of Natural Resources

Phone: (573) 751-4919

Mobucks for More Jobs Program

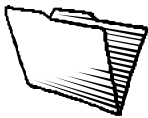
A linked deposit program administered by the Missouri State Treasurer, Mobucks for More Jobs can have a total of \$110 million in loans outstanding at any given time, with interest rates 3% below the average rate on the one-year U.S. Treasury bond for the week preceding the deposit. The minimum deposit rate, however, is 2%, which remains fixed until the deposit matures. Both new and expanding firms that have more than ten employees and their headquarters and operation facilities in Missouri are eligible for this program. At least one job must be created or retained in Missouri for each \$25,000 borrowed. Deposit size ranges from \$90,000 to \$5 million. Funds may be used for:

- relocation expenses;
- working capital;
- interim construction;
- inventory;
- site development;
- machinery and equipment;
- any other expenses necessary to create or retain jobs in the recipient firm.

The Mobucks for Small Business offers loans up to \$50,000 to proprietors, firms, and corporations employing 25 or less. These small businesses must have their headquarters and operations in Missouri. Eligible uses include

- inventory;
- rent, utilities, insurance and taxes;
- professional fees;
- equipment purchase, rental, or lease;
- renovations, repairs, and maintenance of equipment and facilities;
- paving, fencing, loading docks, etc.

To apply for this program, a business must contact a bank directly.



For more information on this program, contact:

Missouri State Treasurer's Office

Phone: (800) 662-8257

Industrial Development Bonds

The Missouri Development Finance Board (MDFB) offers a variety of methods of issuing tax-exempt and taxable bonds for industrial development. Since August 1996, the MDFB has issued "Build Missouri Bonds" for projects in which the borrower is awarded State tax credits for the debt service. Eligible enterprises are manufacturing projects with 100 or more jobs and a \$15 million or more investment and office projects with 500 or more jobs and at least a \$10 million investment. Maturity may not exceed 30 years. Authorization is negotiable and interest rates are subject to market conditions dependent upon the borrower's credit or credit enhancement. Rates can be fixed, variable, or a combination of the two. The Federal tax code generally requires that substantially all bond proceeds be used for the acquisition of property or renovations of fixed assets. The State volume cap for the program is currently set at \$35 million, however there is a strong effort in the State legislature to increase it to \$50 million. During its first year in existence, Build Missouri Bonds have financed five projects averaging \$1.2 million per loan.

Other bond-issuing authorities include the following:

- The Environmental Improvement and Energy Resources Authority (EIERA) provides low-interest bond financing for projects that would reduce, control, and prevent damage to the environment, and encourage research and development of alternative energy sources and facilities. (See above.)
- Municipalities, counties and incorporated towns issue industrial development general obligation bonds for factories and plants in assembling, manufacturing, fabricating and processing to aid job generation in new and expanding firms.
- Planned Industrial Expansion authorities issue bonds in undeveloped and blighted areas to acquire property for clearance and to finance private development. Abatement from ad valorem property taxation for up to 25 years is also available.
- Cities and counties may create a Land Clearance for Redevelopment Authority to develop, construct, repair or improve structures and facilities in blighted areas, and issue bonds for such purposes.
- Cities and counties may also create industrial development authorities to issue tax-exempt industrial development bonds.
- Special business districts can be established by a city for special improvements. The district may tax real property and businesses to fund these improvements, and it may issue bonds.
- Tax-increment financing commissions, created by a city or county, may initiate redevelopment progress in certain areas and issue bonds.



For more information on this program, contact:

Missouri Development Finance Board

Phone: (573) 751-8479

The Loan Guarantee Program

Created in 1982, the Missouri Development Finance Board (MDFB) promotes job creation and expansion of the State's tax base. The board offers loan guarantees targeted to small and mid-sized manufacturers. The Loan Guarantee Program, operated by MDFB, guarantees up to 85% of loans made by banks, up to a maximum guarantee of \$400,000 per borrower. Banks use the guarantees as a substitute for collateral when a firm has a higher risk than the bank usually accepts. Qualifying projects include manufacturing, warehouse, distribution, commercial, audio-video telecommunication, research, port, pollution control and export trade facilities. Manufacturing activities receive priority. Firms must show they have reasonable repayment abilities.



For more information on this program, contact:

Missouri Development Finance Board

Phone: (573) 751-8479

Enterprise Zones

Businesses within Missouri's 61 enterprise zones may earn additional job/investment credits to offset income tax liabilities for up to 10 years. Up to \$1,200 can be earned for each new job created in an enterprise zone. Additional benefits may include credits for training zone-resident employees and special employees, up to a 50% income exemption and up to 100% abatement of taxes on improvements to real property for up to 25 years.

Enterprise Zones in Missouri:

St. Louis Midtown
Phone: (314) 622-3400

Macon/Callao/Bevier/
Macon County
Phone: (816) 385-5627

Potosi/Park Hills/St. Francois
County/Washington County
Phone: (573) 438-6196

Greenville/Piedmont/
Wayne County
Phone: (573) 223-7660

Brookfield (2/84)
Phone: (816) 258-7278

Trenton (2/84)
Phone: (816) 359-4310

Springfield
Phone: (417) 864-1031

Caruthersville/Steele/Hayti/
Cooter/Pemiscot County
Phone: (573) 333-4125

Perryville
Phone: (573) 547-1097

Wellston
Phone: (314) 385-1015

Salem/Licking/Dent County/
Houston/Texas County
Phone: (417) 967-3348

Sedalia
Phone: (816) 827-0884

Kennett
Phone: (573) 888-9001

Chillicothe
Phone: (816) 646-2424

Cabool
Phone: (417) 962-3004

Joplin/Webb City
Phone: (417) 624-0820

Kansas City
Phone: (816) 274-1858

St Joseph/Buchanan County
Phone: (816) 271-4773

Hannibal
Phone: (573) 221-1033

Sikeston
Phone: (573) 471-2174

West Plains/Willow Springs/
Howell County
Phone: (417) 256-7176

Malden/Bernie/Campbell/
Dexter/Dunklin County/
Stoddard County
Phone: (573) 276-2242

Cuba/Steelville/
Crawford County
Phone: (573) 885-4323

Pike County/Bowling Green/
Louisiana
Phone: (573) 324-2077

Kirksville
Phone: (816) 627-1224

Carrollton
Phone: (816) 542-0922

Excelsior Springs
Phone: (816) 630-8449

Nevada/Vernon County
Phone: (417) 667-6084

Poplar Bluff/Butler County
Phone: (573) 785-7761

Milan/Sullivan County
Phone: (816) 265-3434

Cape Girardeau/Cape
Girardeau County
Phone: (573) 334-8326

Butler
Phone: (816) 679-6465

New Madrid
Phone: (573) 748-2866

Neosho
Phone: (417) 451-1925

Shannon County
Phone: (573) 226-3965

St. Louis Satellite
Phone: (314) 622-3400

Claycomo Satellite
Phone: (816) 274-1858

California/Moniteau County
Phone: (573) 796-2113

Rolla
Phone: (573) 364-1835

Kansas City Satellite
Phone: (816) 274-1858

Doniphan/Naylor/
Ripley County
Phone: (573) 996-2212

Eldon/Miller County
Phone: (573) 392-3638

Marshall
Phone: (816) 886-6889

Fredericktown/Ironton/
Pilot Knob/Madison County/
Iron County
Phone: (573) 783-3381

Windsor/Henry County/
Pettis County
Phone: (816) 647-3512

Kansas City Satellite #2
Phone: (816) 274-1858

Buffalo/Dallas County
Phone: (417) 345-2632

LaBelle/Lewistown/
Lewis County
Phone: (573) 767-5304

Charleston/East Prairie/
Mississippi County
Phone: (573) 649-3057

Versailles/Stover/Laurie/
Syracuse/Morgan County
Phone: (573) 378-4634

Marceline
Phone: (816) 376-2000

Putnam County
Phone: (816) 947-2674

Carthage
Phone: (417) 358-9025

Vandalia
Phone: (573) 594-6186

Gasconade Valley
Phone: (573) 437-6564

Mexico
Phone: (573) 581-2100

Daviess/Gentry/
Harrison Counties
Phone: (816) 663-3911

Aurora
Phone: (417) 678-5121

Kansas City Federal
Enterprise Community
Phone: (816) 274-1858

St. Louis/Wellston Federal
Enterprise Community/
St. Louis
Phone: (314) 622-3400

Wellston
Phone: (314) 385-1015

East Prairie Federal
Enterprise Community
Phone: (573) 649-3057



For more information on this program, contact:

Missouri Department of Economic Development

Phone: (573) 751-4241 or (800) 523-1434

Industrial Machinery Equipment and Materials Tax Exemptions

Missouri provides exemptions from sales and use taxation on machinery and equipment used to manufacture a product when purchased to establish a new, or to expand an existing, facility whether bought in Missouri or in another State. The following items are exempt: (1) manufacturing machinery and equipment bought to replace existing machinery and equipment, as long as the replacement is necessitated by reason of product change or design, (2) materials and supplies used to install the categories of exempt machinery and equipment mentioned above, (3) railroad rolling stock used in interstate commerce, (4) pumping equipment and machinery used by common carriers to propel products transported by pipeline, (5) equipment used by common carriers for the manufacture, maintenance or repair of railroad rolling stock, aircraft or motor vehicles, and (6) aircraft purchased for use in interstate commerce by common carriers. The following are also exempt from sales and use taxes: materials, goods, parts, and machinery that become component parts of finished products; materials used to produce steel; motor fuel; fuel used by utilities to provide taxable services; and electricity consumed in the manufacturing process, provided the cost of the electricity exceeds 10% of total production costs. Certified machinery, equipment, and devices that abate air or water pollution are exempt from sales and use taxes.



For more information on this program, contact:

Missouri Department of Economic Development

Phone: (573) 751-4241 or (800) 523-1434

Missouri



Technical Assistance Programs for Manufacturers

Missouri Technology Corporation's Innovation Centers

The main purpose of the Missouri Technology Corporation is to bring science, technology, and quality improvement techniques to the workplace in Missouri. The Corporation also works to attract research investment from both the private and public sectors, assist in developing science education, and coordinate the State's four Innovation Centers. The Innovation Centers, which are located in Columbia, Rolla, St. Louis, and Kansas City, support entrepreneurs and innovators in developing new products and processes. Businesses with close ties to local universities can take advantage of research expertise and resources such as computers, libraries, and other facilities. They also furnish low-cost space and share both administrative and business services.



For more information on this program, contact:

Missouri Technology Corporation

Phone: (573) 526-1366

Center for Advanced Technology at the University of Missouri/Rolla

Missouri has three Centers for Advanced Technology (CATs) that encourage the development and commercialization of advanced new technologies. The University of Missouri/Rolla center specializes in manufacturing technologies and training. Through the promotion of greater collaboration between the State's academic, business, and industrial communities, CATs help create new jobs and new businesses, as well as revitalize existing ones. The University of Missouri/Kansas City Center is concerned with telecommunications and networking.



For more information on this program, contact:

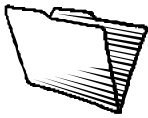
Center for Advanced Technology

University of Missouri/Rolla

Phone: (571) 341-4559 or (573) 341-4111

Missouri Business Assistance Center (MBAC)

Within the Missouri Department of Economic Development, the Missouri Business Center (MBAC) serves as a centralized point of contact for State requirements to do business in Missouri. MBAC staff can help both the seasoned business owner and the first-time entrepreneur begin operations with confidence knowing that all legal requirements have been met. MBAC staff provide a comprehensive array of business assistance. A single contact provides direct assistance and guidance to the various sources, both public and private, for assistance to start, expand, or retain a business in Missouri. Staff also present workshops and seminars on starting a new business.



For more information on this program, contact:

Missouri Business Center

Phone: (800) 523-1434, extension 2

E-mail: mbac@mail.state.mo.us

Missouri Office of Business Information

The Office of Business Information specializes in meeting the information needs of new and existing businesses, as well as local economic development professionals, community leaders, and resource providers, through Missouri. A unique database provides information on Missouri-made products and services along with information on raw materials, brand/trade name, and by-products or surplus materials. Staff utilize Missouri Product Finder to link buyers and suppliers. Information is provided to consumers, retailers, wholesalers, and others, domestic as well as international, on Missouri sources for products, services, and raw materials. A nominal fee is charged for some printouts.



For more information on this program, contact:

Office of Business Information

Phone: (800) 523-1434, extension 5

Missouri International Trade and Development Office

Through one-on-one counseling, the Missouri International Trade and Development Office helps businesses tap into new markets all over the world. The Office will analyze export possibilities for a business's product line, as well as identify potential markets. Additionally, staff from the Office will accompany Missouri firms to trade shows worldwide and will help locate overseas buyers, agents, representatives, licensing, and even joint venture partners.



For more information on this program, contact:

Missouri International Trade and Development Office

Phone: (573) 751-4855 or (800) 523-1434

Ohio



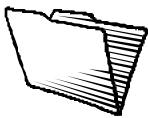
Financial Assistance Programs for Manufacturers

Ohio Enterprise Zone Program

The Ohio Enterprise Zone Program offers local and State tax incentives for businesses that expand or locate in Ohio. Business must agree to retain or create employment and establish, expand, renovate, or occupy a facility in one of 300 enterprise zones throughout the State. An agreement must be in place prior to the start of the project. Projects involving relocation of assets or employment positions within Ohio are restricted and must meet specific requirements. Local guidelines regulate the type of business and investment eligible for incentive. They include:

- In municipalities, up to 75% exemption of the value of real property improvements and/or new tangible personal property for up to 10 years. In unincorporated areas, incentives can be up to 60% exemption of the value of new real and/or personal property for up to 10 years. The exemption level can be exceeded under special circumstances with school board approval.
- State franchise tax benefits are available to businesses which are in compliance with the local enterprise zone agreement and document a minimum of 25% of the new hires coming from specific disenfranchised groups. Additional State incentives available include health care subsidies and disadvantaged worker hiring credits.

Between January 1st and April 30th of each calendar year, an eligible business may apply to the Director of the Ohio Department of Development (ODOD) for these tax incentives.



For more information on this program, contact:

Ohio Department of Development

Office of Tax Incentives

Phone: (614) 466-4551

Linked Deposit Program

The Linked Deposit Program (LDP) helps small businesses secure financing to create and retain jobs. Eligible businesses may obtain loans from an authorized State depository bank to finance fixed assets and working capital and to refinance debt. Although program regulations specify no maximum or minimum loan amount on which the State will buy down the interest, the average loan in the past few years has been \$200,000. Under LDP, the State treasury buys a CD from the bank, and the proceeds to buy down the interest rate of the loan. The depository charges small businesses a fixed interest rate of 3% below the current lending rate for two years. The bank may extend the term at current rates. Other sources of funds are allowable. To be eligible, a business must be headquartered in Ohio and have operations exclusively in Ohio, create or retain one full-time job equivalent for every \$25,000 requested, have less than 150 employees, and be organized for profit. The program can be used in conjunction with other Federal, State and local programs. Prevailing wage requirements do not apply. Businesses must apply through a qualified Ohio bank. The bank then submits an application to the program.



For more information on this program, contact:

Ohio State Treasurer's Office

Phone: (614) 466-8855

Mini-Loan Guarantee Program

The Mini-Loan Guarantee Program assists small businesses that would not otherwise receive financing. Eligible businesses are those with fewer than 25 employees. The State provides a partial guarantee of an eligible bank loan by placing up to 45% of the loan amount with the bank. The bank can draw on this account for a portion of the debt if the loan defaults. Fifty percent of funds are targeted for minority and women-owned businesses. Funds may be used for land, building, machinery or equipment, start-ups, renovations and lease improvements. The bank agrees to pay the State 3% on the loan guarantee account. The terms of the State guarantee are ten years or the term of the bank loan, whichever is less. The maximum loan amount is \$100,000, and the minimum is \$10,000. The business is charged an interest rate that is a blend of the rate on the bank's guaranteed portion of the loan, which is up to 5.5%, and the interest rate on the loan portion for which the bank assumes all risk. For every \$10,000 to \$15,000 of the loan, one job must be created or retained.



For more information on this program, contact:

Minority Development Financing Commission

Economic Development Division

Phone: (614) 644-7708

166 Direct Loan Program

Since 1982, Ohio manufacturers have been eligible to receive a \$1 million maximum/\$350,000 minimum loan for land and building acquisition, expansion or renovation, and machinery and equipment purchases. Up to 30% of fixed costs are eligible for funding. A private lender must participate, and the owner must put up 10% cash equity. Rates are currently fixed at 5% plus 1/4% annual servicing fee. The Director of Development may authorize a higher loan amount or modified loan terms that address a unique and demonstrated economic development need. One job must be created for every \$15,000 received and jobs must be created within 3 years after project completion. The Ohio prevailing wage rate applies. A similar 166 Regional Loan Program is administered at the local level through 12 non-profit regional agencies. While the statewide 166 Direct Loan Program has no volume cap, the regional program is capped at \$50 million. Currently, the statewide program has approximately \$200 million worth of loans outstanding.

166 Regional Loan Agencies:

Greater Cleveland Growth Association

Phone: (216) 621-3300

Cascade Development — Akron

Phone: (330) 376-5550

Columbus Countrywide Development

Phone: (614) 645-6171

Lawrence Economic Development Council — Southpoint

Phone: (614) 894-3838

Buckeye Hills Regional Development District — Marietta

Phone: (614) 374-9436

Citywide Development Corporation — Dayton

Phone: (937) 226-0457

County Corporation — Dayton

Phone: (937) 225-6328

Hamilton County Development Corporation — Cincinnati

Phone: (513) 632-8292

Mahoning Valley Economic Development Corporation — Youngstown

Phone: (330) 759-3668

Toledo Lucas County Port Authority

Phone: (419) 243-8251

Stark Development Board Finance Corporation — Canton

Phone: (330) 453-5900

West Central Partnership, Inc. — Lima

Phone: (419) 229-5320



For more information on this program, contact:

Ohio Department of Development

Office of Financial Incentives

Phone: (614) 466-5420 or (800) 848-1300

Pollution Prevention Loan Program

The Pollution Prevention Loan Program is a joint program between the Ohio Department of Development (ODOD) and the Ohio Environmental Protection Agency (OEPA) to make low-interest capital improvement loans for the purchase of equipment and/or construction to complete pollution prevention activities at small to medium-sized businesses (i.e., 500 employees or less) within Ohio. Interest rates for these loans are fixed at 2/3 of the prime rate. The loans also carry a 25% annual servicing fee, which reduces with the principal. Preferential interest rates are available for qualifying companies in designated “distressed areas” of the State (see *Ohio Manufacturing Investment Tax Credit* below). The term on the loan will be based upon the useful life of the assets being financed and the term of bank loan, not to exceed seven years. An eligible company should demonstrate that its fixed asset expansion will retain jobs for Ohio citizens, is located in the State of Ohio, has a certified pollution prevention project by OEPA and meets the definition of small to medium-sized businesses.



For more information on this program, contact:

Pollution Prevention Office of OEPA

Phone: (614) 644-3469

Or

Economic Development Division of ODOD

Phone: (614) 644-8201

Scrap Tire Loan and Grant Program

Loans and grants are available to scrap tire recyclers who locate or expand in Ohio and who demonstrate that they will create new/reuse scrap tire products. Ohio Department of Development (ODOD) has \$2 million available for qualifying loans and grants, with additional funds earmarked to continue the program through the year 2000. Loans and grants are distributed to qualifying companies on a first-come, first-served basis. Financing is designated as “take-out” financing, wherein a business must complete its project utilizing interim financing from a conventional lender as its equity. Upon completion of the project, the State funds will be disbursed. Preferential interest rates and terms are provided for qualifying companies locating or expanding in “distressed” areas.



For more information on this program, contact:

Economic Development Division of ODOD

Phone: (614) 644-8201

Technology Investment Tax Credit Program

Ohio's Technology Investment Tax Credit Program offers a variety of benefits to Ohio taxpayers who invest in small, research and development and technology-oriented firms. Through this innovative program, Ohio investors may reduce their State taxes by up to 25% of the amount they invest in qualified, technology-based Ohio companies. The program's maximum credit of \$37,500 per investment may be applied to personal income tax, corporation franchise tax, public utility excise tax or the tax on dealers in intangibles.

The Technology Investment Tax Credit can benefit investors who meet a variety of requirements specified by Ohio law. Once an investor has preliminarily determined that the company is eligible for tax credit investment, a number of other requirements also must be considered. The investment for which the tax credit is claimed must be a purchase of common stock, preferred stock, membership interest, partnership or other equity position which does not exceed \$150,000. An investor must incur a risk of loss which depends upon the company's success for repayment. Annual dividends or interest payments to the investor may not exceed 10% of the amount invested. Finally, an investor must prove he is not related to a majority owner of the company in which he is investing and must not be delinquent in State or local taxes.



For more information on this program, contact:

Department of Development's Technology Division

Phone: (614) 466-3887 or (800) 848-1300

Investors interested in applying for the tax credit may also contact the Ohio Department of Development or any of the seven Edison Centers (see *Technical Assistance Programs* below).

Ohio Job Creation Tax Credit

A business can receive a refundable tax credit against its corporate franchise/income tax based on the State income tax withheld on new, full-time employees. The amount of the tax credit can be up to 75% for up to 10 years. Approved projects generally range between 50% to 60% for 5 to 10 years. Municipalities can provide a similar arrangement with their local employee income taxes. Businesses must agree to create at least 25 new, full-time jobs within 3 years of operation. The average wage of all employees must be at least 150% of the current Federal minimum wage. The business must demonstrate to the State that the tax credit is a major factor in its decision to go forward with the project. The local community must also provide financial support for the project.



For more information on this program, contact:

Ohio Department of Development

Office of Tax Incentives

Phone: (614) 466-4551

Ohio Manufacturers Investment Tax Credit

Ohio Department of Development (ODOD) provides a non-refundable corporate franchise income tax credit for a company that purchases new or retools qualified machinery and equipment that is located in Ohio and is used for manufacturing. The company shall receive a 7.5% tax credit on machinery and equipment investments. A tax credit of 13.5% is available to companies making investments in designated areas, which are listed below and are reviewed annually and subject to change. The manufacturing machinery and equipment tax credit would be divided equally over 7 years, and the company is permitted to carry forward any unused tax credit amount for up to three years. All eligible equipment must be set in operation by December 31, 1999.

The following counties are designated either “distressed,” “labor surplus,” “inner city stress,” or “situational distressed” areas in which companies located in these areas are eligible for both the Manufacturers Investment Tax Credit and the Brownfield Site Cleanup Tax Credit (see below):

- Mercer
- Allen
- Ottawa
- Huron
- Ashtabula
- Jefferson
- Harrison
- Belmont
- Guernsey
- Belmont
- Noble
- Monroe
- Perry
- Morgan
- Hocking
- Vinton
- Athens
- Pike
- Jackson
- Meigs
- Galla
- Adams
- Scioto
- Lawrence

The following cities are also designated areas:

- Toledo
- Sandusky
- Lorain
- Cleveland
- Akron
- Warren
- Youngstown
- Cambell
- Alliance
- Canton
- Mansfield
- Marion
- Zanesville
- Columbus
- Springfield
- Dayton
- Hamilton
- Lockland
- Norwood
- Cincinnati
- Union City



For more information on this program, contact:

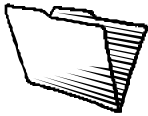
Ohio Department of Development

Office of Tax Incentives

Phone: (614) 466-4551

Manufacturing Machinery and Equipment Investment Tax Credit

Ohio offers a non-refundable corporate franchise and State income tax credit for the purchase of new manufacturing machinery and equipment that companies' locate in Ohio and use for manufacturing. The one-time credit is 20% (up to \$500,000) of the cost of purchasing the new eligible machinery and equipment. The new cumulative investment must equal or exceed 20% of the aggregate cost of all tangible personal property located in the United States and owned by the taxpayer or partners of the taxpayer, at the close of the taxpayer's most recent taxable year. A three-year carry forward for unused portions of the credit is allowable. Eligible machinery and equipment is defined as new equipment purchases, the original use of which is in Ohio.



For more information on this program, contact:

Office of Business Development at ODOD

Phone: (614) 466-4551

Brownfield Site Cleanup Tax Incentives

Brownfield sites are often in very attractive locations. Remediation of environmental problems can bring the sites back into productive use. One initiative proposes a tax credit for a company that cleans a brownfield site and commits to reusing the site for economic development. The credit would apply against the corporate franchise or personal income tax. The credit amounts to 10% of the cleanup cost, with certain ceilings, annually for five years. Eligible activities include environmental studies, site remediation, and asbestos removal. Another measure proposes a grant program to support local efforts toward brownfield site cleanup and reuse in distressed counties and municipalities. These designated areas are identical to the ones eligible for Manufactures Investment Tax Credit (see above).



For more information on this program, contact:

Ohio Department of Development

Office of Tax Incentives

Phone: (614) 466-4551

Research and Development Tax Credit

Ohio offers a sales tax exemption for machinery and equipment used in research and development. The exemption applies only to equipment, and the equipment must be used in qualified research and development activities. Qualified research includes “pure” research (i.e., scientific or technological inquiry and experimentation in the physical sciences) and “directed” research (i.e., research conducted to design, create, or formulate new or better products, equipment, or manufacturing processes).



For more information on this program, contact:

ODOD’s Technology Division

Phone: (614) 466-3086

Or

Ohio Department of Taxation’s Sales and Use Tax Division

Phone: (614) 466-4810

Ohio Export Tax Credit

The Ohio Export Tax Credit is a non-refundable franchise tax credit for corporate or individual taxpayers who increase export sales, if they also increase either Ohio payroll or Ohio capital expenditures. The credit is based on the average increase in export sales during the two years prior to the year in which the credit is claimed. Export sales are defined as those sales that qualify for special Foreign Sales Corporation (FSC) Federal tax treatment. Generally, a business is able to claim a 10% credit of pre-tax profit from increase in export sales, as long as either Ohio payroll or property values increased by 10% over the previous 3 years. If increase is less than 10%, the credit is proportionately reduced.



For more information on this program, contact:

Governor’s Export Initiative

Special Projects Manager

Phone: (614) 466-5017

Or

Ohio Department of Taxation

Phone: (614) 846-6712 or (614) 433-7617

The Integrated Manufacturing Assessment Loan Program

The Integrated Manufacturing Assessment Loan Program will provide six or more manufacturers in Ohio with loans of up to \$40,000 to pay for integrated manufacturing assessments that can help create jobs and preserve profitability. Under a pilot program offered through the Ohio Department of Development, loans will be issued at two-thirds of the current prime interest rate, and require limited principal payments during the first 18 months of the two-year loan.

The program will assist Ohio manufacturers to improve productivity, increase efficiency of energy use, and minimize waste. Under contract with the Ohio Department of Development, IAMS administers the loan program in partnership with service providers throughout the state. Consultants who qualify as service providers are trained to identify improvements that have immediate financial impact, and to implement improvement projects that should generate 100% payback in 12 months or less.

To apply, a company needs to complete a one-page application and supply two years of financial information. Applicants will be evaluated based on their creditworthiness as evidenced by their financial strength and ability to fully repay the loan. Program administrators seek both manufacturers interested in the assistance, and qualified service providers who can deliver a package of process enhancements, waste reductions, and energy efficiency improvements.



For more information on this program, contact:

The Ohio Department of Development

Office of Energy Efficiency

Phone: (614) 466-6797

The Institute of Advanced Manufacturing Sciences

Amby Leach

Phone: (513) 948-2051

Ohio



Technical Assistance Programs for Manufacturers

Small Business Development Center (SBDC) Program

The Small Business Development Center (SBDC) Program is a management assistance delivery program of the U.S. Small Business Administration, administered in partnership with the Ohio Department of Development (ODOD). SBDCs give free and confidential in-depth counseling, business planning, development, training, and other specialized support services to small businesses through a network of 38 centers throughout Ohio.



For more information on this program, contact:

Small Business Development Center

Phone: (614) 466-2711

One-Stop Business Permit Center

The One-Stop Business Center provides comprehensive information on permits required for business start-ups and expansions in the State of Ohio. The Center is a service of the Ohio Small Business Development Center Program. The Center serves as central depository for all State business related forms which can quickly be supplied to the public. It also develops for distribution start-up kits that are tailored for specific types of business. There are more than 270 variations of the kits available.



For more information on this program, contact:

One-Stop Business Permit Center

Phone: (800) 247-4040

Edison Technology Centers

Edison Technology Centers link industry with academia and Government in partnerships to strengthen industrial competitiveness through technological innovation. Each of the Centers offers capabilities in specific technologies including advanced manufacturing, polymers, materials and processes, welding and materials joining, biotechnology, and environmental. Companies involved in the Edison Technology Center programs benefit from:

- Relationships with world class universities and Federal research facilities, providing State of the art basic and applied research technologies.
- A range of technical services including testing, technology analysis and assessment, training, hotlines, business and economic studies, information database retrieval, pilot plant, and microfactory assistance and computer modeling.
- Networking and services which cover informational needs through frequent seminars, forums and conferences.

There are currently seven Edison Centers:

- Cleveland Advanced Manufacturing Program (CAMP) assists manufacturing companies in becoming more competitive through technology. CAMP's areas of activity include: manufacturing engineering, quality assurance, business systems management, simulation of process, chemical and biochemical sensors, robotics, artificial intelligence applications, and customized education and training for the workplace. (See below)
- Edison Industrial Systems Center's (EISC's) goal is to boost manufacturing competitiveness by putting technology to work on the factory floor. EISC can be contacted by calling (419) 531-8610.
- Edison Materials Technology Center (EMTC) helps industry become more competitive through the application of materials and materials processing technology. Technologies including materials such as metals, ceramics, composites and polymers and the unit processes that convert these materials into marketable products, such as casting, forging, heat treating, machining, coating, and finishing. For information call the EMTEC at (513) 259-1365.
- Edison Polymer Innovation Corporation (EPIC) provides technical resources to help polymer related companies grow and prosper. EPIC focus areas include polymer composites, coatings, adhesives and sealants, polymer blends and alloys, polymer processing, and rubber and elastomers. EPIC information can be accessed toll free at (800) 257-EPIC or (330) 668-9411.
- Edison Welding Institute's (EWI's) goal is to enhance the competitiveness of companies through improved materials joining technology, including welding processes, engineering, materials, quality control, automation, sensors, and controls. For information contact EWI by e-mail at www.ewi.org or call (614) 486-9400.

- Institute of Advanced Manufacturing Sciences' (IAMS') mission is to enhance the competitiveness of companies by accelerating the implementation of technology and improving business practices, drawing upon the resources of industry, academia, and Government. For information IAMS can be e-mailed at www.iams.org or phoned at (513) 948-2000.

Cleveland Advanced Manufacturing Program (CAMP)

The Cleveland Advanced Manufacturing Program (CAMP) is a resource for manufacturers who want to be more productive, competitive and profitable. CAMP specializes in providing manufacturing, engineering, and technical and management assistance to manufacturers. CAMP assists companies to modernize their manufacturing operation and effectively manage their business through improvement projects, assessments, appropriate technology, and electronic commerce.

Since 1989, in a partnership with the National Institute of Standards and Technology (NIST), the Great Lakes Manufacturing Technology Center was established as a CAMP division. Utilizing an in-house staff of experienced engineers, this Center brings a team approach to the needs of small-and mid-sized manufacturing firms. Its capabilities also include the 11,000-square-foot Manufacturing Resource Facility, which supports technology demonstrations, education and training, and specific project work.

CAMP delivers services through five Centers based at Case Western Reserve University, Cleveland State University and Cuyahoga Community College. Through these affiliates — the Advanced Manufacturing Center, Center for Automation and Intelligent Systems Research, Edison Sensor Technology Center, Unified Technologies Center, and the Great Lakes Manufacturing Technology Center — CAMP assists industry in the following areas:

- Improving productivity on the shop floor;
- Integrating control and monitoring systems in the manufacturing process;
- Integrating new technologies in the product development process;
- Improving management of the production process;
- Integrating manufacturing engineering systems and methods;
- Selecting and utilizing CAD/CAM/CAE/CIM;
- Assessing environmental services and compliance;
- Auditing production processes;
- Offering technical and market information services;
- Supplying meeting and teleconference facilities.



For more information on this program, contact:

CAMP

Phone: (216) 432-5300

Web Site: www.camp.org

Cinergy (Greater Cincinnati)

Cinergy is an experienced economic development organization with site selection specialists on staff both in Indiana and Ohio. Cinergy helps businesses find the resources they need. As the nation's 13th largest electric utility, Cinergy provides a range of services, competitive rates, technological assistance and energy efficiency assistance to customers. Cinergy offers a wide variety of opportunities for business growth and expansion.

Cinergy's Competitive Edge Program assists industries in the Greater Cincinnati area stay abreast of developments in technology, be globally competitive, and achieve financial success. The four-points to the Competitive Edge Program are as follows:

- Export Assistance;
- Environmental Assistance;
- Energy Assistance;
- Expansion Assistance.



For more information on Cinergy, contact:

Karen Craddock

Cinergy of Greater Cincinnati

Phone: (800) 448-0416

E-mail: kcraddock@cinergy.com

For more information on the Competitive Edge Program, contact:

Shirley Kruse

Director, Economic Development

Phone: (800) 448-0416 or (513) 287-2595

E-mail: skruse@cinergy.com.

Institute of Advanced Manufacturing Sciences, Inc. (IAMS)

The Institute of Advanced Manufacturing Sciences (IAMS) is a not-for-profit industrial assistance organization located in Cincinnati, Ohio. IAMS was founded in 1982 as a joint enterprise between industry, Government, and the academic community. The Institute's mission is to enhance the competitiveness of manufacturers and related business by increasing productivity, improving business practices, and accelerating the implementation of technology. One of seven Thomas Edison Technology Centers (*See Ohio State Programs*), the Institute understands competitiveness and how an enhanced manufacturing base can positively impact the entire community. At the IAMS research facility, experienced staff members offer manufacturing direct on-site engineering services, applied research, training programs, and process demonstrations. IAMS engineers and manufacturing experts provide a variety of other services for industry, including:

- Manufacturing Consulting;
- Machining;
- Pollution Prevention;
- Productivity Assessments;
- Energy Efficiency Assessments;
- Waste Reduction Assessments;
- Computer Aided Process Planning Software.

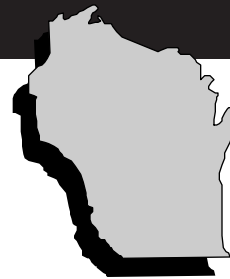


For more information on this program, contact:

Jamie Gherman Seavey

IAMS

Phone: (513) 948-2000



Financial Assistance Programs for Manufacturers

Development Zone Program

The Development Zone Program can help businesses start up, expand, or relocate to Wisconsin. The Development Zone Program is a tax benefit initiative designed to encourage private investment and to improve both the quality and quantity of employment opportunities. The program has \$21 million in tax benefits available to assist businesses that meet certain requirements and are located or willing to locate in one of Wisconsin's 18 development zones. The 18 development zones have been established for seven years; however up to three one-year extensions may be granted. The zones range from rural areas to large cities.

Each community has unique advantages and incentives to offer businesses in conjunction with the development zone tax credits. The State and the local governing bodies of these communities have made a long-term commitment to revitalize their local economies. The long-term development zone plan for each community features the following strategies:

- Improving services;
- Eliminating obstacles to business expansion and development;
- Providing technical assistance;
- Expanding employment opportunities;
- Ensuring the best possible economic future for the community.

The Development Zone Program has something to offer firms of all sizes in a wide variety of industries. Any firm planning a major investment, improvement, or expansion in one of Wisconsin's development zones may be eligible. Credits are available to help businesses with such activities as

- Expanding physical capacity;
- Increasing production volume;
- Developing new manufacturing capability;
- Investing in innovative research and development;
- Expanding employment.

Additionally, jobs and sales tax credits are refundable and, as a result these development zone tax credits, can benefit emerging businesses as well as those with a tax liability. Recommendations for credit allocation are made locally so the program is flexible and can respond to the needs of each zone.



For more information on this program, contact:

Wisconsin Department of Commerce

Bill Wheeler or Peter Thillman

Phone: (608) 267-2045 or (608) 266-375

Or contact the following Development Zones directly:

Adams-Juneau-Marquette

Ms. Kitty Daniel

Phone: (608) 339-6945

Beloit

Mr. Joe Heck

Phone: (608) 364-6700

Eau Claire

Mr. Mike Statz

Phone: (715) 839-4914

Florence-Forest-Langlade-Lincoln

Mr. Gary Rogers

Phone: (715) 623-3633

Fond du Lac

Mr. John Angeli

Phone: (414) 929-3311

Grant-Lafayette

Mr. Ed Bible

Phone: (608) 342-1214

Green Bay

Ms. Gail Niedzwiedz

Phone: (414) 448-3400

Iron County

Ms. Connie Loden

Phone: (715) 561-2922

Janesville

Mr. Doug Venable

Phone: (608) 755-3180

Lac du Flambeau

Mr. Emerson Coy

Phone: (715) 588-3303

Manitowoc

Mr. David Less

Phone: (414) 683-4435

Milwaukee

Mr. Michael Brodd

Phone: (414) 223-5845

Racine

Mr. Thomas Wright

Phone: (414) 636-9151

Richland Center

Ms. Judy Derse Bethke

Phone: (608) 647-4310

Stockbridge-Munsee

Mr. Bob Chicks

Phone: (715) 793-4111

Sturgeon Bay

Mr. William Chaudoir

Phone: (414) 743-3113

Superior

Mr. James Kumbera

Phone: (715) 394-0278

Two Rivers

Mr. Dan Pawlitzke

Phone: (414) 793-5564

Enterprise Development Zone Program

This program promotes a business start-up or expansion on a particular site in any area of the State that suffers from high unemployment, declining incomes, and property values and other indicators of economic distress. The program pays on performance. Tax credits can be taken only on income generated by business activity in the zone.

The maximum amount of tax credits per zone is \$3 million. Currently there are 28 zones designated throughout the State; however up to 50 sites can be designated for projects that are determined not likely to occur or continue unless a zone is created. A business applies to the Department of Commerce for its approval of an application and project plan including information on job creation, hiring of target group members, and investment. A business in an enterprise development zone is eligible to earn the following tax credits:

- Jobs credit: Equal to 40% of the first \$6,000 in qualified wages for the first and second years of employment of a member of a “target group.”
- Sales tax credit: Equal to the amount of sales tax paid on building materials and equipment.
- Location credit: Equal to 2.5% of the cost of acquiring, constructing, rehabilitating, remodeling or repairing real property.
- Investment credit: Equal to 2.5% of the cost of depreciable tangible personal property.
- Research credit: Equal to 5% of increased expenditures on research.
- Child care credit: Equal to expenses incurred by an employer for child care provided to children of target group members. Up to \$1,200 per year per child for two years.
- Environmental remediation credit: Equal to 7.5% of cost of the remediation of contaminated land.



For more information on this program, contact:

Bill Wheeler

Department of Commerce

Phone: (608) 267-2045

Industrial Revenue Bonds

Industrial Revenue Bonds (IRBs) are municipal bonds whose proceeds are loaned to private persons or to businesses to finance capital investment projects in manufacturing operations. All Wisconsin municipalities are authorized to issue IRBs. Communities can issue these bonds to retain or recruit a significant business expansion, thereby building their economic base and adding jobs and investment. Maximum loan is \$10 million. Since its establishment in 1969, over 2,300 bonds have been issued with over \$4.5 billion in proceeds and approximately 39,000 jobs generated as a result. IRBs have several attractive features:

- Even though they are municipal bonds, IRBs are not general obligations of the municipality. The municipality is not responsible for debt service, nor is it liable in the case of default. Instead, the person or business for whom the bonds are sold is responsible for paying the principal and interest on the bonds.
- Because IRBs are municipal bonds, they are exempt from Federal income tax, so they bear lower interest rates than do other forms of borrowing.
- The bond proceeds can be used to finance the entire project, including land, buildings, and equipment.
- The terms of the revenue agreement between the municipality, the bond buyer, and the business can be negotiated to conform to the needs of the business.



For more information on this program, contact:

Richard Kottenbeutel

Phone: (608) 266-3074

Major Economic Development Program (MED)

The Major Economic Development Program (MED) is designed to provide financial assistance for Wisconsin business startups or expansions. The goals of the program are to create or retain a significant number of jobs and to leverage a significant level of private capital investment in the State. Eligible activities include the purchase of land, buildings, equipment, and working capital. Additional consideration will be given to projects having substantial economic impact and public benefit. Funds are available for projects that are unable to secure necessary private capital financing and that are not eligible for one of the several other economic development programs found in the State. The applicant must document that all other avenues of financing have been exhausted before applying to this program. Loans amounts are between \$200,000 to \$500,000.



For more information on this program, contact:

Todd Kearney

Department of Commerce

Phone: (608) 266-6675

Rural Economic Development Program

The Rural Economic Development Program stimulates the start-up and expansion of small businesses in small communities. Businesses with fewer than 25 employees, located in a county with less than 150 persons per square mile or a municipal unit of 4,000 or less are eligible. The business should be starting or expanding operations. The program provides start-up funds not otherwise available through private lenders. Loan criteria include (1) extent to which the project creates jobs, (2) degree to which project will provide services to the community, (3) whether financing is available elsewhere, and (4) probability of project taking place without the loan. Funds can be used only for planning and managerial assistance. Maximum loan amount is \$30,000.



For more information on this program, contact:

Todd Kearney, Program Manager

Phone: (608) 266-6675

Capital Access Program (CAP)

The Milwaukee Economic Development Corporation provides a flexible, non-bureaucratic tool to enable banks to fund loans considered too risky for conventional financing. Almost any business enterprise located within the four-county, metropolitan Milwaukee area is eligible for the Capital Access Program (CAP). This program creates a loan loss reserve to help protect banks from loan losses. There is no minimum/maximum loan amount. Due to the program's simplicity, loans as low as \$500 have been made. Typical awarded loans range between \$5,000 and \$25,000. Loans over \$500,000 require prior written consent from the Wisconsin Department of Economic Development. Since CAP was established in June 1992, 270 loans have been issued to Wisconsin businesses totaling approximately \$6 million.



For more information on this program, contact:

Milwaukee Economic Development Corporation

Phone: (414) 286-5843

Northwest Wisconsin Business Development Fund

The Northwest Wisconsin Business Development Corporation provides loans to promote private sector investment in long-lived assets and to create jobs by addressing capital gaps in the market for long-term debt. The program serves primarily the timber and wood industry as well as manufacturing and tourism industries in Northwestern Wisconsin. Businesses must create one job for every \$5,000 loaned. The fund provides low-interest, fixed-rate subordinated debt for up to 40% of a project.

Loans between \$20,000 and \$50,000 are available. Eligible Wisconsin counties are:

- Ashland
- Bayfield
- Burnett
- Douglas
- Iron
- Price
- Rusk
- Sawyer
- Taylor
- Washburn



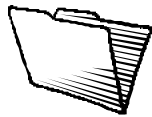
For more information on this program, contact:

Northwest Wisconsin Business Development Fund

Phone: (715) 635-2197

Rural Development Loan Funds

Rural Development Loan Funds encourage investments in Wisconsin that lead to job creation. Two funds, one in Turtle Lake and the other in Clear Lake, provide affordable interest rates and terms with a minimum of “red tape” to expansion and start-up companies. Funds can be used for the purchase of land, buildings, inventory, and working capital. Loans usually range from \$1,000 to \$5,000. Applicants must submit a business plan with financial history and projections.



For more information on this program, contact:

Impact Seven, Inc.

Rural Development Loan Fund (Turtle Lake)

Phone: (715) 986-4171

Or

Rural Development Loan Fund (Clear Lake)

Phone: (715) 263-2532

Renewable Energy Assistance Program

Since 1992, the Renewable Energy Assistance Program has encouraged the utilization of renewable fuels in Wisconsin by reducing the capital cost of installation of renewable energy systems. Firms are eligible for assistance if (1) corporate annual sales are less than \$100 million, (2) they produce or use a renewable fuel, and (3) they have a boiler site between 15 to 500 horsepower or produce electricity from a power source between 20 kw and 1,500 kw. Maximum grant available is \$75,000. A 50% match on technical assistance grants and a 70-90% match on equipment installation grants is required. The Wisconsin Energy Bureau provides between 15 to 25 grants per year that totals approximately \$320,000.



For more information on this program, contact:

Wisconsin Department of Administration

Energy Bureau

Phone: (608) 266-8234

Business Development Bond Program

The Wisconsin Housing and Economic Development Authority (WHEDA) provides below-market, fixed-rate loans to manufacturers for fixed assets via the sale of tax-exempt bonds. Manufacturers with gross sales of \$35 million or less, including parent company, affiliates and all subsidiaries, are eligible to receive low-interest loans for projects which create or retain jobs. Funds can be used for land, building and equipment purchases, but not for the refinancing of existing debt or prior obligations. Typical awarded loans are between \$1 million and \$10 million. In order to apply, a business must obtain a lender's irrevocable letter of credit and meet with WHEDA staff to discuss the project and to obtain an application.



For more information on this program, contact:

WHEDA

Phone: (800) 642-6474

Wisconsin Business Development (WBD) Loan Program

The Wisconsin Business Development Finance Corporation (WBD), a private, nonprofit development corporation created to serve the long-term credit needs of Wisconsin's small businesses, is certified by the U.S. Small Business Administration as a development company for SBA's 504 and other programs. To be eligible for a fixed, below-rate loan, an applicant must be a for-profit business with under a \$7.5 million net worth and an average net after-tax profit of under \$2.5 million for the previous two years. The amount of WBD participation may not exceed 40% or a maximum of \$1 million of the cost of the project. At least half of the funding must come from non-Federal sources. Applicant pays roughly 3% of the debenture plus \$2,500 legal fees. Funds can be used for the acquisition of land, buildings, and equipment. The WBD can also assist in securing financing through other SBA loan programs, including SBA 7(a) loans. Additionally, the WBD can work with other sources of financing such as the Wisconsin Department of Commerce and the Wisconsin Housing and Economic Development Authority (WHEDA).



For more information on this program, contact:

Wisconsin Business Development Finance Corporation

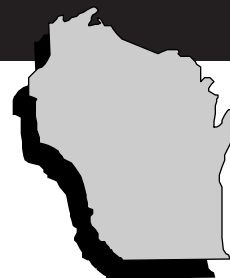
Phone: (608) 258-8830

Other Financial Resources Available to Wisconsin Businesses

The Wisconsin Department of Commerce has a broad range of financial assistance programs to help businesses and communities undertake economic development. For more information, businesses and communities can call 800/HELP-BUSINESS.

- **The Employee Ownership Assistance Loan Program** can help a group of employees purchase a business by providing individual awards up to \$25,000 for feasibility studies or professional assistance. The business under consideration must have closed or suffered substantial layoffs within one year prior to the group's application. For more information contact Mr. John Stricker at (608) 267-0774.
- **The Minority Business Development Fund** can provide financial support for early business planning or stimulate acquisition or expansion of an existing business. Projects may require matching funds. To qualify for the fund, a business must be 51% controlled, owned, and actively managed by minority group members, and its project must retain or increase employment. For more information contact Mr. Robert Wynn at (608) 266-8380.
- **The WDF Customized Labor Training Fund** provides training grants to businesses that are implementing new technology or production processes. The program can provide up to 50% of the cost of customized training that is unavailable from the Wisconsin Technical College System. For more information contact Ms. Jinny Williams at (608) 266-2766.
- **The WDF Technology Development Fund** helps businesses or business academic consortia finance Phase I product development research. Firms completing Phase I projects can receive Phase II product commercialization funding. For more information contact Mr. John Stricker at (608) 267-0774.
- **The Wisconsin SBIR Bridge Financing Program** can provide up to \$40,000 to help SBIR Phase I winners maintain their research operations while awaiting Phase II Federal funding decisions. For more information call (608) 267-0775, 266-0241, or 266-2766.
- **The Wisconsin Trade Project Program** can help small export-ready firms participate in international trade shows. The business covers its own travel and lodging expenses. The Department of Commerce can then provide up to \$5,000 in reimbursements to a business to cover costs associated with attending a trade show, such as product brochure translation. For further information contact Mr. Lou Janowski at (608) 266-0393.

Wisconsin



Technical Assistance Programs for Manufacturers

Area Development Manager Program

The Area Development Manager Program assists business expansions, promotes business retention and helps local development organizations in their respective territories. Area development managers use their knowledge of Federal, State and regional resources to provide a variety of information to expanding or relocating firms. They also mobilize resources to help struggling businesses. Local economic development practitioners can turn to area development managers for assistance with long-term marketing and planning strategies.



For more information on this program, contact:

Roger Nacker

Bureau Director

Phone: (608) 266-1386

Or contact an Area Development Manager by region:

- **Region 1 (Northwest):** Marty Ambros at (715) 836-2630
- **Region 2 (North Central):** Mary Jo Carson at (715) 345-5303
- **Region 3 (Green Bay/Northeast):** Dennis Russell at (414) 498-6302
- **Region 4 (Southwest/South Central):** Dan Madden at (608) 267-2250
- **Region 5 (East Central):** Larry Baker at (414) 238-2227
- **Region 6 (Milwaukee/Southeast):** Vic Grassman at (608) 266-0563
- **Region 7 (Central):** Kathy Heady at (608) 266-4499

Wisconsin Energy Bureau

The Wisconsin Energy Bureau, created in 1973, administers Federal energy conservation funds (see above) and develops and coordinates emergency energy policies and programs. Analysts maintain up-to-date information on availability, use, prices, and regulatory issues for oil, gas, coal, renewable energy resources, and energy efficiency techniques. The Energy Bureau also houses the State Energy Information Clearinghouse which responds to thousands of public requests for information each year.

Financial support for the Energy Bureau's efforts comes from both Federal and State sources. The bureau administers Federal energy conservation funds provided to Wisconsin through the State Energy Conservation Plan (SECP), the Wisconsin Energy Initiative 2 and the Midwest Biomass Program. Federal energy funds also enable the bureau to carry out many of its energy research and monitoring functions. Energy efficiency programs funded by oil overcharge repayments are planned and administered by the bureau, the Governor and the U.S. Department of Energy.

The Energy Bureau's Energy Resources Section collects, analyzes and publishes Wisconsin energy use statistics, and develops analytical models to evaluate and forecast energy related trends. Forecasting activities range from evaluating the immediate outlook for petroleum supplies and predicting energy prices, to providing 20-year forecasts of the State's electricity supply requirements. It also is responsible for preparing and implementing contingency plans for energy emergencies. In addition to data collection and forecasting, the Bureau's Energy Initiatives Section administers a variety of conservation and financial assistance programs for residential, commercial, industrial and institutional energy users in Wisconsin.



For more information on this program, contact:

Wisconsin Energy Bureau

Phone: (608) 266-8234

E-mail: energy@mail.state.wi.us

Small Business Clean Air Assistance Program

The Small Business Clean Air Assistance Program, a joint effort between the Wisconsin Departments of Commerce and Natural Resources, helps smaller businesses understand and comply with Clean Air Act regulations. Businesses that are independently owned and operate with fewer than 100 employees may qualify for free assistance. A program representative can help with compliance information, fact sheets or rule summaries, air permitting explanations, or technical assistance.



For more information on this program, contact:

Pam Christenson

Department of Commerce

Phone: (608) 267-9214

or

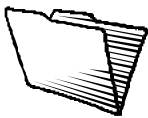
Department of Natural Resources

Phone: (608) 267-3136

SBIR Proposal Review Service

The Small Business Innovation Research (SBIR) Program is one of the most important sources of Federal grants for small technology companies. The grants are offered by 11 Federal agencies. Since 1983, State firms have received 215 awards totaling \$43.6 million. The Department of Commerce offers an SBIR Proposal Review Service to help small firms successfully apply for this program. Peer reviewers review the proposal and provide comments. To take advantage of this service, an applicant should contact the Technology Clearinghouse at 1-800 TECH-LINE, where he/she will be directed to send the firm's application to the Technology Clearinghouse Coordinator. The coordinator will:

- Find appropriate reviewers and determine their availability to assess and comment on your proposal.
- Send your application to the reviewers.
- Return reviewed application and comments to the firm.



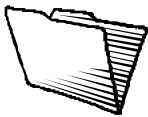
For more information on these resources, contact:

Technology Clearinghouse

Phone: (800) TECH-LINE (832-4546)

Small Business Ombudsman

Wisconsin's Small Business Ombudsman assists business owners with specific complaints about State laws, administrative rules or agency interpretations; provides information and referrals on special programs. The Ombudsman also monitors the progress of legislation and rules and acts as a small business advocate; conducts training and organizes local networks to encourage entrepreneurship; and administers Wisconsin's Regulatory Flexibility Act, which provides for special consideration of small businesses in State administrative rules.



For more information on these resources, contact:

Cheryl Gain

Department of Commerce

Phone: (608) 267-9384

Small Business Development Centers (SBDC)

For small business counseling and management education, contact the following Small Business Development Centers (SBDC):

University of Wisconsin

(UW) Extension

Administrative Unit

432 N. Lake St., #425

Madison, WI 53706

Phone: (608) 263-7766

UW Eau Claire

Phone: (715) 836-5811

UW Green Bay

Phone: (414) 465-2089

UW LaCrosse

Phone: (608) 785-8782

UW Madison

Phone: (608) 263-7680

UW Milwaukee

Phone: (414) 227-3240

UW Oshkosh

Phone: (414) 424-1453

UW Parkside

Phone: (414) 595-2189

UW Stevens Point

Phone: (715) 346-2004

UW Superior

Phone: (715) 394-8351

UW Whitewater

Phone: (414) 472-3217

For special SBDC Services for such as evaluation of commercial feasibility of new product ideas or inventions, contact:

Center for Innovation and Development

UW Stout (at Menomonie)

Phone: (715) 232-5026

Wisconsin Innovation Service Center

Preliminary evaluation of incentives

UW Whitewater

Phone: (414) 472-1365

Other Technical Assistance Programs

Wisconsin offers many technical assistance programs to both small and medium-size businesses seeking to expand opportunities or to comply with various State and Federal laws and regulations. For information on State permits or licenses, available buildings and sites, labor availability, taxes, finance sources and resolution of regulatory problems, contact the Department of Commerce at (800) HELP-BUSINESS or (608) 266-1018, or contact the following agencies and programs:

- **The Business Development Initiative Program** offers technical help and grants to startup and expanding firms owned by or hire persons with disabilities. For more information contact Mr. Dale Verstegen at (414) 227-4061.
- **The Small Business Assistance Office** provides management assistance to small businesses, particularly first-time entrepreneurs. The office furnishes information on government regulations and financing alternatives, and refers businesses to appropriate resources. For more information call (800) HELP-BUSINESS

- **The Manufacturing Assessment Center** helps small and medium manufacturers improve quality and productivity through professional assessment of operations, systems, and layouts. The center maintains a list of related seminars available throughout the country, and can arrange plant tours of leading-edge manufacturers in the State. For more information contact Mr. Karl Arps, P.E., (608) 266-0165.
- **The Permit Information Center** manages regulatory and permit clearance for economic development projects. It informs companies of all sizes about permit processes and deadlines. The center speeds up the issuance of permits, and resolves delays and communication problems. For more information contact Mr. Jim Holahan at (608) 267-0297.
- **The Women's Business Services Program** helps women entrepreneurs start or expand their businesses, and improve their business operations. It identifies accessible sources of financing for these firms, and also assists in business planning, financial projections, and cash-flow-statement preparation. For more information contact the Women's Business Services at (800) 435-7287.
- **The Technology Clearinghouse** (1-800-TECH LINE) provides technical assistance, referrals, and information to technology-based businesses for State, university, private and Federal technology programs. As part of its clearinghouse efforts, the Department sponsors conferences and workshops to assist technology-based businesses. For more information contact Mr. Louie Rech, (608) 267-9382.

International Development Programs

Companies that want to learn how to begin or expand their export efforts can call the Export Hotline at (800) XPORT-WI. International Offices are located in Frankfurt, Hong Kong, Mexico City, Seoul, Tokyo, and Toronto. Participating in a variety of promotional activities, such as trade shows and Wisconsin product exhibits, the offices forward trade leads and set up business meetings between State firms and potential clients.

- Export Consultants can visit a company and discuss the mechanics of exporting. For more information contact Mr. Jim Arndt in the DePere Office at (414) 403-1333, Mr. Lou Janowski in the Middleton Office at (608) 831-9456, or Ms. Mary Lynn Murtaugh in the Waukesha Office at (414) 691-5147.
- Publications offered by the Department on international trade include the Wisconsin Directory of Foreign Investments, Wisconsin Exporters Directory, and Wisconsin International Trade Handbook. Export statistics and trade data are also available. For more information contact Mr. Stanley Pfrang at (608) 267-0639.
- Trade Shows and Trade Missions showcase Wisconsin firms and products to prospective international clients. The Department sponsors a Wisconsin-products booth at approximately 12 international trade fairs per year, and also arranges trade and reverse investment missions abroad, many of them led by the Governor. For more information contact Ms. Jane Hatleberg at (608) 267-9227.

Argonne National Laboratory

9700 South Cass Avenue • Argonne, Illinois 60439

Phone: (800) 627-2596 • *Fax:* (630) 252-5230 • *Web:* www.anl.gov

Contact: Paul Eichamer • *E-mail:* pdeichamer@anl.gov

Argonne National Laboratory is a research and development laboratory owned by the U.S. Department of Energy (DOE) and operated by the University of Chicago.

Argonne is organized into more than 30 divisions focusing on diverse scientific disciplines, such as chemistry, materials science, energy and environmental technology, mathematics, and computer science. Argonne's technical programs cut across these divisions to meet research and development objectives. Through basic research and applied research and development partnerships with industry, Argonne advances the state-of-the-art in all of these fields. Argonne also operates many unique research instruments and facilities to support its research and development objectives.

Argonne is located on a 1,700-acre site 25 miles southwest of Chicago. It employs 4,300 people, nearly half of whom are scientists and engineers. A second Argonne site in Idaho Falls, Idaho, employs about 700 people.

CANDO

The Chicago Association of Neighborhood Development Organizations

343 S. Dearborn, Ste. 910 • Chicago, IL 60604

Phone: 312-939-7171 • Fax: 312-939-7236

Contact: Ted Wysocki, Executive Director

CANDO is the largest citywide coalition of economic development organizations in the United States, with over 85 nonprofit Chicago neighborhood-based retail and industrial development organizations and over 120 citywide nonprofit and for-profit firms as members. CANDO is chartered as an Illinois Not-for-Profit Corporation. For over 17 years, CANDO has actively interacted with the public sector (City of Chicago, State of Illinois, and the Federal Government) and with the private sector (retail and industrial businesses constitute the membership base of our nonprofit CANDO Voting Member organizations; and over 40 banks are CANDO Affiliate Members). CANDO is the critical link between these sectors to promote the redevelopment of Chicago's neighborhoods.

Our mission is to promote commercial and industrial revitalization in Chicago's neighborhoods; to serve as liaison between member groups and Government agencies, foundations, news media, and other institutions; to provide technical assistance to neighborhood development organizations; to make financing available to neighborhood retail and industrial businesses; and to formulate public policies or respond to existing ones without regard to partisan politics.

CANDO's work can be divided into six major programs:

1. **Industrial Expansion:** Bringing resources together to expand Chicago's precious manufacturing job base.
2. **Retail Attraction:** Improving the quality of neighborhood life by filling missing market needs in retail areas.
3. **The DEED program:** Enabling low-income neighborhoods to plan & implement their own development strategies.
4. **CANDO City-Wide Development Corporation:** Financing Neighborhoods: Capitalizing neighborhood businesses and property owners to strengthen the local economy.
5. **Self-Employment Loan Fund & Business Development Services:** Financing for emerging women- and minority-owned businesses to help them grow.
6. **CANDO Member Services and Capacity Building:** Providing expertise to enhance neighborhood retail and industrial business organizations.

The Congressional Task Force on Manufacturing

Rep. Bob Franks (R-NJ), Co-Chair
225 Cannon HOB
Washington, DC 20515
Phone: (202) 225-5361
Fax: (202) 225-9460

Marty Meehan (D-MA), Co-Chair
2434 Rayburn HOB
Washington, DC 20515
Phone: (202) 225-3411
Fax: (202) 226-0771

General Mission. The Congressional Task Force on Manufacturing, formed in 1993, is a congressional member organization devoted to the study of manufacturing conditions in the United States. The purpose of the bipartisan Task Force is to call to the attention of Congress and the President the importance of the manufacturing sector and the obstacles that American manufacturers face. The primary goal of the Manufacturing Task Force will be to conduct an analysis of the relative strengths and weaknesses of the American manufacturing sector with regard to our worldwide competitiveness, and to issue reports and legislative proposals designed to aid manufacturers in improving workforce skills, enhancing technology development and transfer, increasing savings and investment, strengthening U.S. competitiveness, expanding exports and encouraging innovation.

Specific Objectives. The bipartisan Congressional Task Force on Manufacturing will study economic conditions related to the manufacturing sector. These will be compared with the conditions of major American competitors. The conditions to be studied include, but are not limited to, production costs, tax treatments, research and development incentives, market accessibility, regulatory costs/benefits, labor markets, and legal systems.

The Task Force will conduct meetings and briefings/hearings in Washington and in industrial regions of the United States, and it will invite testimony from manufacturers, trade associations, academia, labor, state and federal government agencies involved in commercial and economic development, and trade officials. While the Manufacturing Task Force will cover all types of manufacturers, particular attention will be given to small and medium-sized firms. In July 1994, the Task Force issued its first report to Congress and the President

The Congressional Task Force on Manufacturing provides its members with an array of services, including Capitol Hill briefings, informative publications, field forums, legislation drafting, testimony assistance, and Dear Colleague distribution. As a bipartisan group that transcends the congressional committee structure, the Manufacturing Task Force is able to take a comprehensive look at the problems facing America's manufacturing sector and to suggest federal policies that could help overcome those problems.

Commonwealth Edison Company

1919 Swift Drive • Oak Brook, Illinois 60521

Phone: (630) 684-3711 • Fax: (630) 684-3719

Contact: James Kiriazes, Industrial Programs Manager

Chicago-based ComEd is the Nation's third-largest consumer electric utility and is engaged principally in the production, purchase, transmission, distribution, and sale of electricity to both wholesale and retail customers. ComEd is the only regulated subsidiary of the Unicom Corporation, which has approximately 180,000 shareholders and was incorporated in 1994 to become a National leader in energy and energy-related services.

The Unicom Corporate structure was organized to maintain a leadership position within ComEd's existing service area, while simultaneously building a portfolio of National energy to meet and exceed the needs of a competitive marketplace. In the new, unregulated energy market, Unicom will remain an intense local retailer, committed to building significant revenue streams from unregulated product and service lines. Unicom's unregulated subsidiaries include:

- **Unicom Thermal Technologies, Inc.** This subsidiary provides district cooling and other energy-related services throughout North America. Based in Chicago, which is now home to the world's largest ice-based district cooling system, Unicom Thermal Technologies has also launched new business ventures in Boston, Las Vegas, Houston, and Windsor, Ontario, Canada.
- **Unicom Energy Services, Inc.** Created in May, 1997, Unicom Energy Services will provide "one stop energy shopping" to commercial and industrial customers throughout the Midwest. Through this new subsidiary, Unicom will offer advisory services to customers to increase energy efficiency via energy monitoring; improved indoor air quality; and upgraded lighting, heating, and cooling systems.

In July 1997 Unicom Energy Services and AlliedSignal formed a strategic alliance to market Allied-Signal's TurboGenerator, which is a lightweight, cost-effective power source that will be a new tool in the competitive market sparked by deregulation of the Nation's electric utility industry. The TurboGenerator is the world's most promising distributed generation source, and will provide commercial and industrial customers with clean, quiet, portable, on-site energy generating capability that can eliminate the need to buy power at peak rates and provide cogeneration capabilities for additional thermal requirements. Unicom and AlliedSignal expect that distributed generation products like the TurboGenerator will account for 40% of all new power generation within the next 10 years. In July 1997 Unicom Energy Services announced an Energy Performance Contract with the Great Lakes Naval Base to reduce the facility's energy consumption by 30%. The contract, valued at \$5 million, initially targeted 94 of the more than 1,100 buildings at Great Lakes, which is the Nation's only remaining Naval Recruit Training Center.

Then, in August, 1997, Unicom Energy Services and Sonat Marketing company, L.P., the natural gas marketing subsidiary of Sona Inc., announced the formation of a natural gas marketing joint venture company – named Unicom Gas Services – to sell retail natural gas and related services to commercial and industrial customers throughout the Midwest region.

At Unicom, natural gas added significantly to the company's growing portfolio of energy products and services. Collectively, these marketing initiatives will transform Unicom from an electric utility to an integrated energy company.

- **Unicom Energy Resources, Inc.** This subsidiary focuses on the development of power projects and other business ventures such as Unicom's Strategic Alliance with AlliedSignal to market the TurboGenerator.

Council of Great Lakes Industries

1968 Green Road, P.O. Box 134006, Ann Arbor, MI 48113-4006

Phone: (313) 663-1944 • *Fax:* (313) 663-2424

The Council of Great Lakes Industries (CGLI) is a non-profit association uniting major Canadian and U.S. firms and associations interested in influencing policy in the Great Lakes basin. The Council was formed in 1991 by a group of Great Lakes firms and the Federal Reserve Bank of Chicago, with a mission to promote the economic growth and vitality of the region, in harmony with its human and natural resources (sustainable development).

Membership

American Forest & Paper Assoc.	BASF	Bayer Rubber Corporation
Browning-Ferris Industries	Canadian Chlorine Coordinating Ctte.	Canadian Petroleum Products Institute
Chlorine Chemistry Council	CN North America	Dow Elanco
Dow Chemical Canada, Inc.	Clark Hill	ERIM International, Inc.
Eastman Kodak Canada	The Dow Chemical Company	Ford Motor Company of Canada
Falconbridge Limited	Eastman Kodak Company	Georgia-Pacific Corporation
General Motors Corporation	Ford Motor Company	ITT Automotive
Holnam, Inc.	Geon Corporation	Occidental Chemical Corporation
New York Power Authority	INCO Limited	
Xerox Corporation	Ontario Hydro	

Through working relationships with National associations, CGLI represents over 200 companies with significant investments, facilities, products, or services in the Great Lakes region.

CGLI is a virtual organization. Members prioritize CGLI's agenda based on emerging policy issues and projects they are willing to commit corporate resources to accomplish. The work of CGLI is based on a commitment to a public-policy process in and affecting the Great Lakes region where policy is based on an integrated view of economic, societal and environmental issues. Robert Stempel, retired Chairman of General Motors, is the Chairman of the Board of Directors made up of corporate officers of member firms. George Kuper is President and Chief Executive Officer.

Issues currently on CGLI's agenda include the management of persistent toxic and bioaccumulative substances, land use, transportation, trade, manufacturing supply chain integration and energy.

CGLI has sponsored two Roundtables on North American Energy Policy. The first in October 1995 in Montreal confirmed that there are business opportunities for industry by incorporating public concerns regarding global climate change issues in strategic plans. The second Roundtable, convened in April 1997 at the Cantigny Estate in suburban Chicago, identified specific business opportunities for the Great Lakes region at the same times as responding to public concerns about global climate change.

The agenda was based on the assumption that, even if the scientific community is uncertain, the perception of global warming problems will lead to efforts by public decision makers to mandate reductions in carbon dioxide generation (and other greenhouse gases) from industrial activities. The science behind global climate change forecasting was not a subject of either Roundtable. Funding for these Roundtables was supplemented by the Joyce Foundation with additional support from the Robert R. McCormick Foundation.

East West Corporate Corridor Association

701 East 22nd Street, Suite 221 • Lombard, Illinois 60148-5080

Phone: (630) 691-8718 • *Fax:* (630) 691-3988

Contact: Bonnie J. Wood, Executive Director

The East-West Corporate Corridor Association (EWCCA) provides a consensus-building forum to develop a common voice in the business community to address key issues. It is a unique organization which provides an alliance through which its membership explores issues of critical importance to business success in the Chicago area. The EWCCA provides a common voice for addressing long-term strategic interests, such as economic development, Government relations, education and workforce issues.

Communication, cooperation and corporate citizenship are essential to meeting EWCCA member needs in the business community. More than 135 companies and organizations comprise the EWCCA. They represent over 100,000 employees in the Chicago suburban area.

Membership provides linkages to corporate peers facing similar circumstances and decisions and, as a result, interest in parallel issues. EWCCA's organizational structure provides opportunities for involvement at many levels, from direction at the Board level to "hands on" participation of practitioners.

Direction and vision for EWCCA are initiated by the Board of Directors in conjunction with members and staff. Work plans are developed to define broad objectives and specific projects. Active committee involvement provides the ability to accomplish these organizational objectives.

Current committees include Human Resources, Economic Development, Government Relations, Transportation, Education and Finance.

The Energy Resource Center

The Energy Research Center M/C 156 • University of Illinois at Chicago

851 South Morgan Street, 12th Floor • Chicago, Illinois 60607-70554

Phone: (312) 996-4490 • *Fax:* (312) 996-5620 • *Web:* www.erc.uic.edu

Contact: Michael Chimack, Senior Research Engineer • *E-mail:* mchimack@uic.edu

The Energy Resources Center (ERC) is a University of Illinois at Chicago interdisciplinary research and public service organization. It was established in 1973 by the University's Board of Trustees to conduct studies in the field of energy and to provide local, State, and Federal Governments and the public with current information and advice on energy technology and policy.

The Center's professional research staff has been drawn from a variety of university disciplines. For almost two decades the Energy Resources Center has worked with local, State, and Federal Government agencies, National laboratories, legislative commissions, energy industries, public utilities, and public interest groups on a broad range of projects. Specific areas of expertise include energy conservation, public service, energy technology evaluation, energy education and professional training.

The technical engineering professional staff has the capabilities to carry out on-site energy efficiency and mechanical system analysis, and review of manufacturing processes to achieve greater efficiency. For specific details on a wide variety of applications and capabilities contact Michael Chimack.

First Utility Finance

A First National Bank of Maryland Company

305 West Chesapeake Avenue • Fourth Floor • Towson, MD 21204

Phone: (888) 512-4780 ext 1 • *Fax:* (888) 512-4785

Contact: Louise P. Kelly

First Utility Finance specialized in designing and administering comprehensive, private label, equipment finance programs for electric power utilities and their non-regulated affiliates. First Utility Finance is backed by the substantial resources of First Maryland Bancorp, an \$18 billion subsidiary of the \$50 billion Allied Irish Banks, the largest bank in Ireland.

First Utility Finance provides an array of energy efficient equipment finance solutions for consumers, businesses, commercial property owners, government entities and not-for-profit organizations:

- unsecured installment loans
- credit cards
- home equity loans
- commercial and residential service contracts
- commercial term loans
- a variety of commercial lease types
- tax exempt municipal leases
- federal government contracts
- shared savings and guaranteed savings contracts
- end use contracts
- commercial construction and permanent mortgages
- financing alternatives for under served customer segments

....truly a one stop shop for energy project financing for ALL of an electric power utility's divers and comprehensive customer segments

And that's not all - First Utility Finance provides consultative marketing support in the following areas:

- market segment analysis
- target marketing
- contact data base development
- credit risk analysis
- market sizing
- value proposition analysis
- direct mail strategies
- trade ally network strategies
- special invoicing techniques
- and more

First Utility Finance has the experience and resources to put in place today a comprehensive customer finance program for the forward thinking electric power utility that seeks to achieve corporate objectives, enhance marketing program results and expand customer loyalty well beyond tomorrow.

First Chicago NBD Corporation

One First National Plaza • Chicago, IL 60670

Phone: (312) 732-4000 • *Fax:* (312) 732-5976 • *Web:* www.fcncbd.com

First Chicago NBD Corporation, the Nation's 9th largest bank holding company, is the Midwest's market leader in providing financial services to consumers, middle market companies and large corporations.

First Chicago NBD provides focused and sophisticated financial services to corporate and institutional customers in the United States and major international markets. These include corporate banking services such as credit, cash management, and risk management.

The Corporation also provides domestic and international financial services to middle-market companies through its American National Bank and NBD Bank subsidiaries.

LaSalle National Bank

135 South LaSalle Street • Chicago, Illinois 60603-3499 • Phone: (312) 904-2000

For seventy years, LaSalle National Bank has been serving businesses, institutions and individuals throughout Chicago and the Midwest. Our full range of convenient, flexible services and products helps our customers achieve their banking objectives. LaSalle's progress is a measure of our customers' success. We are now one of the Midwest's largest commercial banks with assets of more than \$14 billion. LaSalle is a subsidiary of ABN AMRO North America, Inc., the North American subsidiary of ABN AMRO Bank, N.V. With assets of more than \$385 billion, ABN AMRO is one of the twenty largest banks in the world and has more than 1,600 locations in over 68 countries across the globe.

Sophisticated Technology and Superior Support. LaSalle is committed to using technology to help our clients enhance their treasury management operations. With our resources and expertise, we can put technology to work for you... saving time and money and improving performance. We know that customer service is just as important as technology. Our professionals are ready to provide solutions tailored to your individual requirements.

Industry Expertise. LaSalle offers clients the benefits of a bank with special industry expertise. Businesses in a variety of industries rely on our in-depth knowledge of their markets, including:

- healthcare
- insurance
- contracting
- commercial real estate
- correspondent banking
- construction
- industrial
- manufacturing
- transportation

We can provide financing for leveraged buyouts and acquisitions, as well as employee stock option plans (ESOPs). Through our subsidiary, LaSalle National Leasing Corporation, we provide financing for a wide variety of equipment needs. The nationwide full-service lessor specializes in tax-oriented leasing services to manufacturers, distributors, and service organizations.

Comprehensive Services. LaSalle provides a full range of products and services to help our clients meet their business objectives.

Commercial Banking. Credit and non-credit serves for middle-market businesses — and their owners and managers — and for correspondent banks, including lending and real estate services.

Treasury Management. Innovative, easy-to-use suite of treasury management tools for computers includes CashPro+® and CashPro Trader+™. Other automated solutions include Comprehensive Payables Service, Purchasing Card, Lockbox and Electronic Data Interchange.

International. Trade finance services, export financing, letters of credit, documentary collections and payment orders. Our state-of-the-art trading room provides a full range of foreign exchange services.

NICOR/Northern Illinois Gas

1844 Ferry Road • Naperville, Illinois 60563

Phone: (630) 305-9500, ext. 2829 • Fax: (630) 983-9183 • Web: www.nicorinc.com

Contact: Bob Mudra, Senior Market Planner • E-mail: bmudra@nicorinc.com

Company Description. NICOR Inc. is a holding company. Its principal businesses are Northern Illinois Gas, one of the Nation's largest gas distribution companies, and Tropical Shipping, a containerized shipping business which operates between Florida and the Caribbean. NICOR also owns several energy-related subsidiaries and is a partner in NICOR Energy, a provider of unregulated energy products and services.

Northern Illinois Gas is the largest natural gas distribution company in Illinois, serving about 1.9 million customers. They operate a 28,000-mile distribution system and one of the largest underground storage aquifer systems in the nation.

Description of relevant programs or products:

1. *Engineering Analysis.* NICOR's engineering experts will perform analysis of customer facilities to determine the most efficient energy applications for a given facility. Customers can receive studies on a variety of applications, including: cogeneration, process heat treating, plastics, prime movers, cooling and desiccants to name a few.
2. *Energy Procurement and Management.* Formed as a joint venture of NICOR and NGC Corporation, NICOR Energy offers natural gas, electricity and related retail services to industrial, commercial and residential customers throughout the midwest. NICOR Energy also offers special commodity pricing options. And, as a Federal Energy Regulatory Commission (FERC) power broker, NICOR Energy will be able to offer customers electric service when electric deregulation takes effect.
3. *Performance Contracting.* From start to finish, NICOR develops and manages energy-related capital projects such as cogeneration, chiller replacements and lighting retrofits. We facilitate everything from design, financing, construction and operation to performance guarantees to help you save money and build a competitive business.
4. *Research, Testing and Product Commercialization.* NICOR offers solutions to your operational, engineering and procedural concerns. Our services also include: underground piping installation, corrosion protection, field testing of gas distribution systems, development and commercialization of energy products and consulting services.
5. *Alternative Fuel Vehicles.* NICOR will work with your company's transportation team to convert your fleet of vehicles to operate on clean-burning natural gas. Operating your fleet on natural gas may help you comply with state or federal environmental regulations.

NORBIC, North Business & Industrial Council

2500 West Bradley Place • Chicago, Illinois 60618

Phone: (773) 588-5855 • *Fax:* (773) 588-0734 • *Web:* www.norbic.org

Contact: Carl B. Bufalini, President and CEO • *E-mail:* norbic@worldnet.att.net

The North Business & Industrial Council, NORBIC, is a membership driven not-for-profit corporation whose mission is to promote business growth within the Chicago metropolitan area. By pooling the resources of corporations, Government agencies and economic development organizations, NORBIC provides hands-on technical and professional assistance to over 1,700 manufacturers and 260 members. Services offered by NORBIC include the Small Business Development Center, International Trade Center, NAFTA Opportunity Center, Procurement Technical Assistance Center, Local Industrial Retention Initiative, Model Industrial Corridor Program, Technical Services Program, and Pollution Prevention Program.

NORBIC works at the behest and direction of its member companies to address an array of issues — from those directly related to business operations (i.e., city services, financing, expansion) to those affecting the quality of life in Chicago, such as unemployment, crime, education, training, and transportation. In general, NORBIC serves as an advocate, advisor, resource, and facilitator on behalf of its members in working with, or bringing together both the public and private sectors.

NORBIC maintains contacts with the City of Chicago's Department of Planning and Development and Illinois' Department of Commerce and Community affairs, as well the U.S. Departments of Commerce, Energy, Defense, and Labor.

Northeast-Midwest Institute

The Center for Regional Policy

The Northeast-Midwest Institute, the Center for Regional Policy, is a nonprofit research and public education organization dedicated to the long-term economic vitality of the northeastern and midwestern states. It conducts research, develops public policies, provides technical assistance, sponsors regional conferences, and distributes publications.

The Institute is unique among Washington policy centers because of its close working relationship with the Northeast-Midwest Congressional and Senate Coalitions. Founded in 1976, the Congressional Coalition, co-chaired by Reps. Marty Meehan (D-MA) and Bob Franks (R-NJ), is a bipartisan group of nearly 100 representatives who recognize the common problems facing their states. The Northeast-Midwest Senate Coalition, formed in 1978 and co-chaired by Sens. Jim Jeffords (R-VT) and Daniel Patrick Moynihan (D-NY), has 36 members. Together the Coalitions seek to inform members of Congress about the impact of Federal legislation and build consensus on issues of regional importance.

The Institute sponsors the Northeast-Midwest Leadership Council, a distinguished panel advising members of Congress on issues affecting the region's future. Composed of corporate, academic, and labor leaders, the Council presents the private-sector viewpoint on how public policies should be shaped to create jobs and expand business.

States served by the Institute and Coalitions are: Connecticut, Delaware, Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, and Wisconsin.

Peoples Energy Corporation

Economic Development Services

130 East Randolph Street • Chicago, Illinois 60601

Phone: (312) 240-4892 • *Fax:* (312) 240-4867

Contact: Jerry B. Todd

Peoples Energy Corporation was incorporated in 1967 and is a holding company for several energy and energy related subsidiaries.

Peoples Gas and North Shore Gas, both operating public utilities, are engaged primarily in the purchase, storage, distribution, sale, and transportation of natural gas. Peoples Gas has 2,804 employees serving approximately 839,000 residential, commercial, and industrial retail sales and transportation customers within the City of Chicago. North Shore Gas has about 137,000 customers in suburban Chicago and Northeastern Illinois.

Three other wholly owned subsidiaries of the Company are Peoples Energy Services Corporation (Peoples Energy Services), Peoples NGV Corp., and Peoples Energy Resources Corp. (Peoples Energy Resources). Peoples Energy Service offers natural gas and energy management related services. Peoples NGV Corp. is a participant in a partnership that was formed to develop on-site fueling services for natural gas-powered fleet vehicles. Peoples Energy Resources pursues energy-related ventures. Neither the three subsidiaries nor any of their partners are regulated as a public utility.

Peoples Energy provides free, confidential consulting services to help retain, attract and develop local business. These services include

- Location assistance
- Technical Energy expertise
- Energy Cost-Benefit Analysis
- Demographic Information
- Incentives for Innovative Gas Technology
- Gas Transportation Services
- Referral Services.

Valley Industrial Association

2111 Plum Street • Aurora, IL 60506-3295
Phone: (630) 892-4228 • *Fax:* (630) 892-4280
Contact: Colleen M. Ruddy, President

The Valley Industrial Association (VIA) is a trade association representing the interests of manufacturing and those companies who serve manufacturing in the Fox Valley, an area 50 miles west of Chicago stretching from Elgin in the north to Aurora in the south.

It has earned its long history (chartered in 1902) and powerful reputation for serving its member by:

- being the manufacturer's advocate in legislative matters;
- conducting research on Government regulations and business conditions for its members;
- compiling annual wage, salary, and personnel surveys;
- offering educational and training seminars;
- providing networking opportunities.

Membership in the VIA provides companies with the chance to make valuable contacts with peers and clients, to stay on top of developments that affect the cost of doing business in the region and effectively to do business better.

Benefits to membership in the VIA include

- exchange of information with companies in similar businesses;
- participate and share information from the VIA surveys, including: Factory Hourly Rates of Pay; Office Clerical Rates of Pay; Supervisor and Foremen Salaries; Personnel Policy and Practices;
- network with other companies including present and potential customers;
- meet with civic and political leaders to voice your concerns;
- attend periodic meetings on special concerns: i.e., deregulation of electricity, innovative compensation plans, new OSHA regulations, and workers' compensation;
- request research;
- access training grant money to pay up to ½ of your training costs (for manufacturers);
- send employees to the VIA supervisory training programs and management seminars.

Ohio Department of Development

77 S. High Street • P.O. Box 1001 • Columbus, OH 43216-1001

Phone: 1-800-848-1300 • *Web Site:* www.odod.ohio.gov

The **Ohio Department of Development** is responsible for the creation, retention and expansion of job opportunities for the State of Ohio. The Department, made up of eight divisions, administers both short- and long-term economic development programs. These programs make Ohio an industrial and technological leader throughout the United States. Department of Development programs help retain companies already located in Ohio, attract national and international companies to locate their operations in Ohio, and provide assistance to Ohio companies looking to export their products to new markets. Other programs assist entrepreneurial and minority business growth, help build healthy communities, and keep the state's businesses competitive in world markets.

Serving as a catalyst, the Department promotes partnerships involving local communities, the private sector, and state government. It frequently calls upon public-private sector advisory groups to assess the ODOD programs and Ohio's business climate. Such groups include: the Ohio Job Creation Tax Credit Authority, the Ohio Economic Development Council, the Minority Development Financing Commission, the Ohio Housing Finance Agency, the Development Financing Advisory Board, the Ohio Coal Development Technical Advisory Committee and the Industrial Technology Enterprise Advisory Board.

The Department of Development has 12 regional offices located throughout the state. Ohioans can receive assistance in accessing the department's many programs through these offices.

The Community Development Division administers a variety of state and federally funded programs that benefit low- and moderate-income individuals and families. As part of the state's overall development efforts, CDD coordinates these programs to form a comprehensive strategy to build stronger, healthier communities throughout the state.

The **Office of Energy Efficiency** is located in the Ohio Department of Development (ODOD), Community Development Division (CDD). OEE has primary responsibility for the development of policies that promote the efficient use of energy and renewable energy resources. It works to develop and strengthen public and private partnerships that use energy efficiency to enhance economic benefits and better the environment in Ohio's commercial, industrial, residential, education and transportation sectors. Below is a summary of the primary services OEE provides to promote energy efficiency state-wide. For more information contact Sara Ward, Chief. Telephone number 614/ 466-6797, Email: sward@odod.ohio.gov. OEE Website: 222.odod.ohio.gov/cdd/oe.

Commercial / Industrial and Transportation Services

- Clean Cities
- Conversion Facilities Exemption
- Energy Efficiency Revolving Loan Fund
- Integrated Manufacturing Assessments
- National Industrial Competitiveness through Energy, Environment, Economics (NICE³)
- Ohio Materials Exchange
- Motor Challenge
- Rebuild America

Residential Services

- Home Energy Ratings
- Home Weatherization Assistance Program
- Ohio Weatherization Training Center

Education and Public Awareness Services

- Energy Efficiency Bookmark contest
- Energy efficiency Skills for Professionals
- Governor's Award for Excellence in Energy Efficiency
- Ohio Energy Project
- Ohio Public Facilities Maintenance Association